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ATHLETIC JOURNAL

Vol. XXIV. January, 1944

All-Age Groups in a Well-Rounded National Physical Fitness Program

A Speeded-Up Basketball Program
Howard G. Mundt

Plays from the Bowl Games

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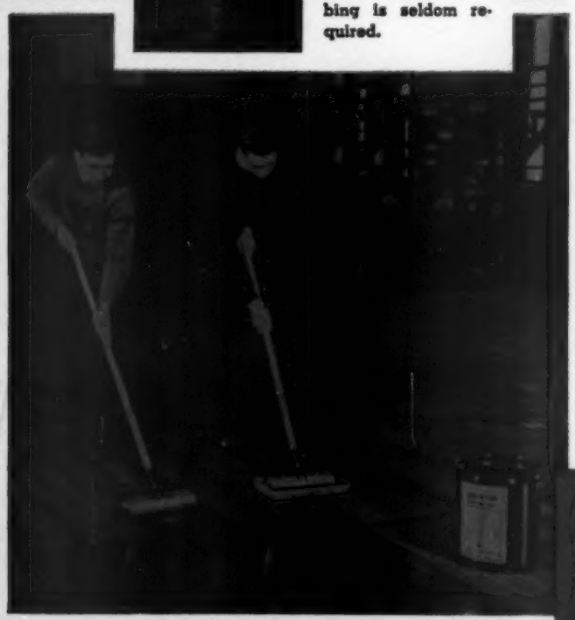

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VOLUME XXIV

The ATHLETIC JOURNAL

NUMBER 5

CONTENTS

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PAGE

All-Age Groups in a Well-Rounded National Physical Fitness Program

5 The National Physical Fitness Committee.....Dr. Frank S. Lloyd

5 The Athletic Institute.....John L. Griffith

7. Physical Fitness and the High School Victory Corps..Rall J. Grigsby

8 Boxing in High School.....John J. Walsh

12 Editorials

16 A Speeded-Up Basketball Program.....Howard G. Mundt

20 The All-Star Basketball Game.....Arthur C. Lonborg

22 Teaching Basketball Defense by the Question and Answer Method.....Cecil R. May

26 Mars Invades the High School.....H. V. Porter

26 The American Legion Junior Baseball Program.....H. L. Chaillaux

28 Recreation a War-Time Necessity in Industry.....Ray Millard

30 Physical Fitness Via Softball.....M. J. Pauley

32 Your Future Champions.....Carl L. Nordly

34 The N. C. A. A. Speaks for Colleges

36 Fit to Fight.....Brigadier General Walter L. Weible

40 Plays from the Bowl Games

43 The Trainers Section

43 The Frequency of Head Injuries in Relation to Games and Sports.....Lieutenant L. A. Pennington, U. S. N. R.
Lieutenant R. J. Mearin, U. S. N. R.

45 Athletics and the Size of the Heart.....W. W. Tuttle, Ph.D.

46 Posture.....Samuel J. Picariello

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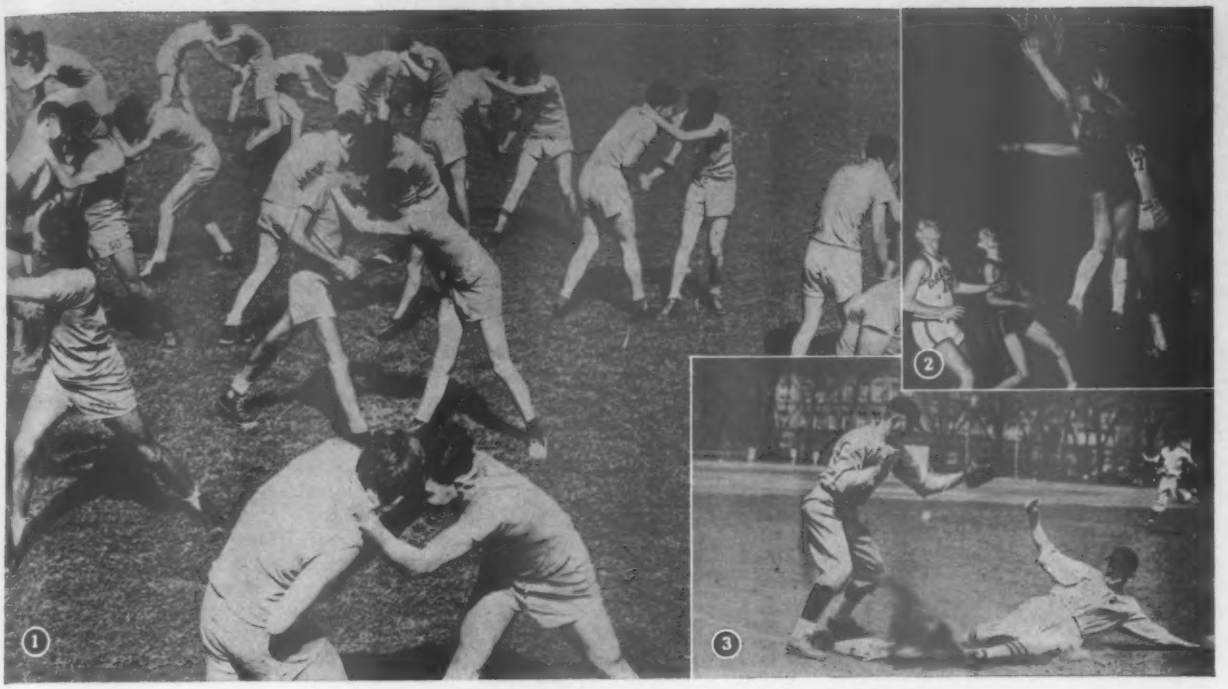

(1) From a Victory Corps Program (2) (3) Oak Park High School

All Age Groups in a Well-Rounded National Physical Fitness Program

The Committee on Physical Fitness

By Dr. Frank Lloyd

Executive Officer of National Committee

THE Committee on Physical Fitness was created in April, 1943 with the following responsibilities:

1. Define and study problems relating to the promotion of physical fitness, in cooperation with national agencies and organizations, and encourage the development of co-operative programs for their solution.

2. Serve as a center for the stimulation of state, district, and local programs for the promotion of physical fitness.

3. Make available to states, localities, and organizations and agencies, upon request, the services of specialists in physical fitness.

4. Prepare materials and serve as a clearing house on informational matters pertaining to the development of a national program of physical fitness.

The Committee on Physical Fitness has been in actual operation since June, 1943 when it had its first meeting in Washington. It is made up of nineteen individuals who, it was believed, could best formulate the policy and administer its responsibilities through a small executive staff. The membership on the committee includes representatives from the armed forces, the United States Selective Service, the United States Public Health Service, Community War Services, professional sports, college athletics, high school athletics, school physical education, the Athletic Goods Manufacturers' Advisory Committee, social agencies, and state physical fitness organizations.

The committee deemed it advisable at its first meeting to organize a National Council of Physical Fitness, representative of the various institutions interested and concerned with the promotion of physical fitness. At the present moment this national council is made up of sixty-five representatives, including labor, management, the American Medical Association, the American Dental Association, women's clubs, the American Legion, various professional organizations, educational and social agencies. This national council was organized to advise the committee on policy. To date it has been effectively used for membership on various commissions which have been appointed to study and report on, for example, youth in physical fitness, women in physical fitness, physical fitness for over forty, special emphasis periods for physical fitness and conditioning exercises, physical fitness in industry, etc. It has not been deemed advisable because of the exigencies of travel to bring this group together in a single meeting, but it has rendered an invaluable service as it has provided advice and guidance.

The committee, having been given the responsibility for "the promotion among individuals of all ages of an interest in the improvement of their health and physical condition," believe that it can best achieve its end as it works to promote a consciousness on the part of all of the people of the need for increased physical fitness and, through the fullest use of existing agencies, make programs for physical fitness easily available to all people.

The Athletic Institute

By John L. Griffith

President, The Athletic Institute

WHEN a nation engages in an all-out war, national weaknesses come to the front and are corrected while the nation's elements of strength are accentuated and utilized to the fullest extent.

Several months before Pearl Harbor many of our young men were given physical and medical examinations by our navy

and army doctors. The examinations showed this time, as they did at the time of the other war, that too many of our young men were not physically capable of doing the work that the army and navy required of its personnel.

At once different organizations were committed to the task of trying to correct the weaknesses that existed according to the draft statistics. One of these organizations was the Athletic Institute. This organization came into being at the time of World War I. At that time the government had asked the men of the sporting goods industry to pool their requirements in the matter of raw materials and later, when the army and navy purchased athletic equipment on a large scale, this organization, which was at that time called the Chamber of Commerce of Sporting Goods Manufacturers, designated certain of its members to co-operate with the army and navy in respect to their needs.

The Chamber of Commerce of Sporting Goods Manufacturers in later years, made up very largely of the same men who had constituted the original organization, adopted a different name, and still later the name The Athletic Institute was selected.

The Institute through the years has been engaged in conducting the kind of work that, today, so many of our organizations are conducting as a part of our war effort.

We have before, perhaps, mentioned the fact that the Institute from the beginning of the American Legion baseball program contributed the money that was required to start the program and carry it on for two years. Mr. Homer Chaillaux, Director of the Americanism Commission of the Legion, has traced the records of the boys who from the beginning have played on state championship teams in the Legion contests and found that 90 per cent of these lads were physically fit, as was evidenced by the fact that they had been inducted into the military service. If the Institute had never done anything else but originate the idea of Junior Legion baseball and pay for the starting of the program, its existence would be justified.

When softball was in its infancy, the Institute contributed a substantial sum for three years to the men who were attempting to organize this sport. Today, softball is in a flourishing condition, Roy Johnson, president of the Amateur Softball Association and M. J. Pauley its executive secretary having made excellent contributions to the development of the game.

Further, the Institute some years ago, in the early days of semi-professional baseball, assisted financially in the work of organizing and promoting this sport.

Three years ago when the war was in the offing, the Institute directors at a meeting in Chicago resolved that the organization should be used in every way possible to help our country by stressing physical fitness and by helping to toughen and harden pre-inductees, by and, through the promotion and development of athletic programs. One thing that the Institute has done since that meeting in Chicago was to assist the men who were promoting industrial recreation. As one contribution to industrial recreation this year, the Institute co-operated with Purdue University by establishing the Floyd R. Eastwood Professorship of Industrial Recreation at Purdue. It should be noted that the experience of the men and the women who are working in the defense factories in Russia, Great Britain and the United States need a certain amount of recreation to keep them at their peak of condition, so that they can do the tremendously important job which it is theirs to do.

Since the function of the Institute is to aid organizations that are already established rather than to undertake the promotion of sports as an association project, it is safe to predict that, when industrial organizations realize the importance of industrial recreation, the Institute will withdraw from the scene and spend its time and money in helping other worth-while projects.

This year, the Institute financed the publication of a clip sheet which was published under the able direction of Joe Graffis. This sheet was sent to the papers of the country, giving sport news from the different military camps, and naval stations.

The Institute has voted to underwrite the work that the American Legion is planning to do in the matter of community athletics. In these days of juvenile delinquency there is an especial need for organized recreation in sports and athletics in our several communities. The Legion is well qualified to do the job of setting up sports committees in the 12,000 towns and cities where Legion posts are operating. This should be of interest to all of the school and college coaches and athletic directors located in those communities where athletics are to be promoted.

Prominent among the Institute's units devoted to broadening the nation's participation in sports is the division known as the National Golf Foundation. Established in 1936, the promotional activities of this particular unit were, until war began, concentrated on school and college physical education departments and on municipal and other recreation organizations offering broad population coverage.

Through its booklets, *Golf in Schools* and *Golf in Physical Education*, the Foundation brought the life-long benefits of the game to the attention of school and college authorities throughout America with the result that golf instruction was made available to hundreds of student bodies.

As an aid to student instruction, lesson booklets graphically illustrating the basic elements of golf play and containing an outline of the rules, etiquette, etc. were furnished without cost to school athletic directors for distribution to golf-class students. In the six-year period preceding the war, more than 400,000 of these golf lessons were ordered by the schools.

Similar instruction material was furnished newspapers and golf-driving ranges throughout the country to help implement the instruction of free golf classes which they conducted for the public.

With the advent of war the normal functions of the Foundation promptly made way for a nation-wide program designed to arouse America's golf clubs and their 2,235,000 players to immediate, all-out war activity. Within two weeks following Pearl Harbor the Foundation had bulletined every golf club in the United States with suggestions for utilizing the vast potentials of their facilities and their members in support of the war effort.

Some time after the National Physical Fitness Committee was established, upon the recommendation of the Institute, a committee was appointed by the National Physical Fitness Committee to head up the work of post-war planning as regards physical fitness matters in general and sports and athletics in particular.

The Institute for a number of months enlisted the help of the Theodore R. Sills Organization, in disseminating factual information regarding some of the matters that were more or less in the minds of the American people. To elaborate, there were some who felt that it was not patriotic for our young boys, while waiting for their numbers to be called, to toughen and harden themselves by playing high school and college games such as football, basketball, swimming, and the like. The Sills Organization, with its staff of experts, collected the factual data and passed on the results of their findings on matters of this sort to the American people. After having started the campaign, the sports writers of the leading papers of the country were told what was being attempted and asked if they wished to receive the material which the Sills Organization was collecting. Several hundred sports writers requested that this material be sent to them and the result was that the American people were, thanks to the Institute, given some facts on which to base conclusions regarding the perpetuation of school and college sports and the value of athletics in general to a country in war time.

The directors of the Athletic Institute are as follows: C. P. Binner; H. L. Chaillaux; W. C. Cowen; Fred deBeer; Charles M. Evans; John B. Goldenberg; John L. Griffith, President; Ed Hawes; G. H. Hamacher, Secretary-Treasurer; L. B. Icely; Dr. Frank S. Lloyd; Thomas Lynch;

C. F. Robbins; John T. Rodgers; L. W. St. John; Mason Scudder; K. L. "Tug" Wilson; Fielding H. Yost; Members in the Service—Lieut. Commander C. E. Forsythe, Lieut. Colonel Frank G. McCormick; Captain Glenn H. Morris.

Physical Fitness and the High School Victory Corps

By Rall I. Grigsby
Acting National Director
High School Victory Corps
United States Office of Education

JANUARY 1944 finds us in the third year of the war—a year that bids fair to be crucial, that will demand everything of us if victory is not to be unnecessarily delayed; hence, a year that will permit of no relaxation of effort on the home front.

Today the No. 1 enemy on the home front is a growing complacency—a complacency fed by news of victories, warmed by optimistic dreams of a quick peace, lulled by pictures of post-war luxuries to come. This complacency can sabotage our will-to-war, cause us to relax our efforts. Today many people have forgotten Prime Minister Churchill's warning: "Unless some happier event occurs on which we have no right to count, then 1944 will see the greatest sacrifice of life by the British and American armies since Gettysburg and Waterloo."

The schools of America are an important part of the home front. Do teachers and school officials complacently count the war already won? A year ago the schools were bending every effort to do their full duty in the war. The High School Victory Corps program, launched October 1942, had by January 1943 been organized in more than half of the nation's high schools. Foremost among the objectives of the program was the preliminary preparation of youth for those war services to come after they left school, service in the armed forces or work in industry, agriculture and other essential civilian occupations. Pre-induction training for fighters-to-be and preparatory training for workers-to-be—these were the major curricular aims of the Victory Corps program. Participation in war service activities while yet in school was an important supplementary feature of the program.

Basic in the Victory Corps pre-induction training program, as in its preparatory training program, was an appropriate physical fitness program for every high school boy and girl. Reports indicate that an estimated 80 per cent of the nation's high schools last year modified their physical education programs in such ways as, giving more time in the school schedule to vigorous sports and exercises, undertaking more thorough physical examinations of students, with follow-up to encourage corrective treatment, making activity programs more strenuous and offering more health instruction.

Thus the Pennsylvania Department of Public Instruction reports: "Participation in a physical fitness program is mandatory upon students who are accepted into membership in the Victory Corps. The physical education program of the secondary schools has been materially improved by the insistent demands of the armed forces on the one hand, and by the concrete and practical suggestions of the Physical Fitness Manual, published by the United States Office of Education, on the other. Even schools which formerly maintained only a token program in physical education, because of alleged lack of equipment, now find that equipment and even a gymnasium, though highly desirable, are not indispensable. Playground, barricaded streets, and open fields are now used for carrying on the activities designed to develop muscular strength, bodily skills and physical endurance."

That was last school year. This year the High School Victory Corps continues as an effective organization. Thousands of high schools are continuing to stress the program of physical fitness.

This year the physical fitness program, whether or not tied in with an active Victory Corps organization, has met increasing difficulties. Male teachers have become a rarity in many communities. Trained and experienced teachers of physical education have been replaced in many instances by emergency teachers. Medical examinations of students become increasingly difficult to secure in the face of the over-load on medical staffs. Yet, in face of these difficulties the schools are carrying on with the help of other teachers, wider use of student-leaders, and with the unstinted co-operation of local medical and dental societies.

The High School Victory Corps is proving to be one of the most effective ways of counteracting complacency and preparing youth for service to their country. Mr. Frank B. Lindsay, State Director of the High School Victory Corps in California, says: "The High School Victory Corps is not another 'fad' added on an already overburdened curriculum. It does not result in more courses, but better courses intelligently prescribed for the individual in the light of his abilities."

"San Diego High Schools G.A.A. activities this year include tennis, ice skating, badminton, team sports, drill teams, and swimming . . . G.A.A. participation is recognized in the Victory Corps program."

Pasadena, California, reports: "The portion of the Victory Corps program concerning individual health problems is being particularly stressed in Pasadena schools."

Cincinnati, Ohio, reports: "The Victory Corps has helped to influence changes in the curriculum and has increased the emphasis on physical fitness and vocational guidance. It has offered more opportunities for pupils to serve as part-time workers or as volunteers in community services. It has also been the means for developing more pupil participation through newly organized student councils which should offer an unusual opportunity for our future citizens to become more familiar with the problems of government."

St. Paul, Minnesota, reports: "St. Paul 12th grade boys are required to take a full year of physical education. The city department of education is following prescribed courses of the Victory Corps. . . . Practically every school in Minnesota has intensified its program of physical fitness in accordance with requests from the United States Office of Education."

In concluding this brief article, let me allude again to the dangers inherent in the growing attitude of complacency abroad in the land. True it is that our army and navy have the initiative now.

(Continued on page 26)

Are the High School and College Physical Fitness Programs Producing Results?

READERS of this publication will be interested in the personal opinion as expressed to a member of our editorial staff by Colonel Theodore P. Bank, prewar Director of Athletics at the University of Idaho, and now Director of Special Service Division of the War Department.

"I definitely believe that we are on the right track and that all efforts to improve physical fitness programs should be redoubled. In my personal opinion the increased emphasis on physical fitness in schools and colleges during the past year has resulted in better conditioned inductees coming into the army. There is no doubt in my mind as to the increased effectiveness of present programs in conditioning the youth of the country physically.

"Although no organized survey has been initiated by the army, and no attempt has been made to separate the statistics on present inductees, reports from the field indicate that the present teen-age inductees are more physically fit than those inducted a year ago."

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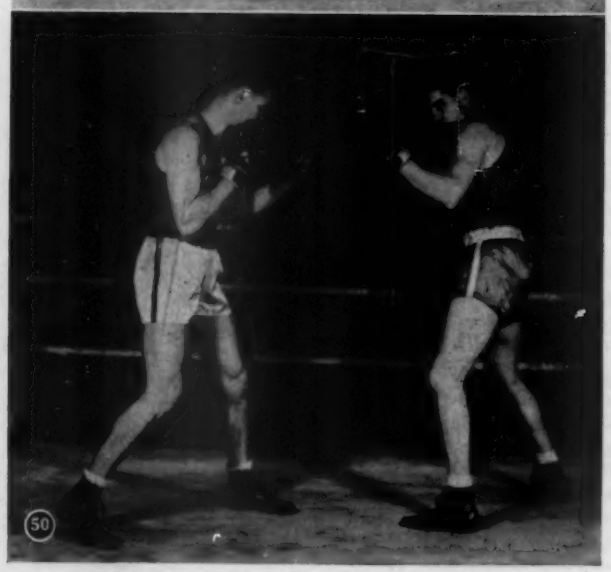

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Boxing in High School

The Left Hook—One-Two-Three to Chin—One-Two-Three to Body—The Left Hook

By John J. Walsh

Boxing Coach, University of Wisconsin

IN previous articles we have carefully analyzed four punches, the left jab to the chin, which for convenience in teaching, we called Number One, the right cross to the chin, Number Two, the left jab to the body Number Three and the right to the body, Number Four. Actually there is only one other necessary punch to be mastered by the prospective champion, and that is the left hook, which we will call, Number Five. As I stated in Article II, in the October issue, boxing is not a difficult sport to learn, nor to coach. It is merely a matter, for the boy, of mastering a few fundamental punches and blocks; for the coach of being able to teach the necessary technique in these few punches. A left jab, a right cross, interspersed with a few left hooks, are all the equipment necessary for a winning boxer. These three punches, *done right*, will win over the "fancy Dan" advocate every time.

The Left Hook

The left hook is the most difficult of the punches to master, and in turn is a bit more difficult to teach, but once accomplished, it pays dividends. As in the jab and cross, there are a few "musts" to be followed to deliver a proper left hook, so let us examine the steps to be followed.

Illustration 48 shows the position of the feet at the *start* of the left hook and Illustration 49 at the *finish* of the left hook. Note at the start of the hook, the feet are in the regular on-guard position, that is, the boxer is on the ball of the left or front foot, and on the toe of the back or right foot. At the finish, this is reversed; the boxer is on the toe of the front foot, and on the ball of the back foot. Note further that both toes at the finish twist to the right and the left knee is bent. This is necessary because of the pivot of the body to the right when the left hook is thrown. Much of the "kick" behind the left hook is accomplished because of this footwork, hence it is vitally important that the shift be made from the toe of the back foot to the toe of the front foot. It is good practice for the coach to have his boys go through this foot shifting over and over again, before teaching the actual punch.

Illustration 50 shows the *start* of the left hook and 51, the *finish*. As usual the left hook begins from the old reliable on-guard position. This is necesary for the proper deception. The opponent does not know whether to expect a jab, a cross, a feint, or a hook, as long as they all start from the same position. Note that, at the finish of the punch, the left thumb is up, the same as it was at the start of the punch (Illustrations 6 and 7, October issue). There is no twisting of the fist as in the left jab and cross. This is necessary for the proper protection of the hand. Note further that the forearm is *rigid* from the elbow to the knuckles, and not bent at the wrist. This makes for greater punching power and prevents sprained wrists. The hook is thrown in a half arc to the opponent's chin and with a complete follow-through motion for power.

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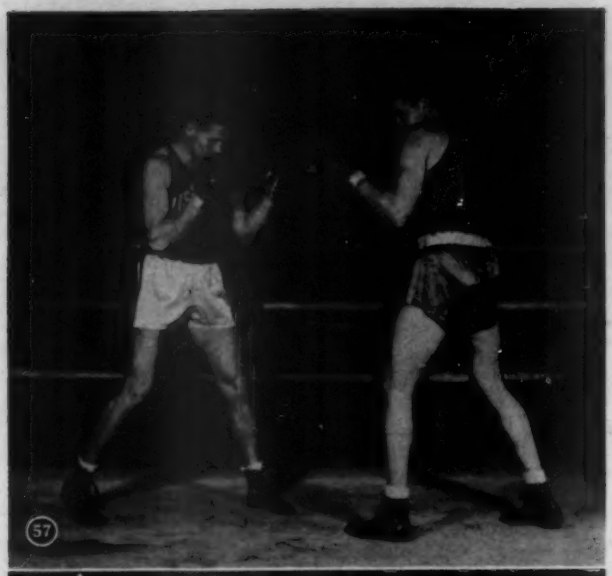

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A left hook, thrown properly, has a tremendous "kick" to it. It must be a loose, easy, snappy, punch. Too often a boxer tries to put too much body behind the punch, thereby making it too much of a push punch. The coach should emphasize that the hook is a loose arm-motion punch and that the kick comes from the looseness of the delivery and the proper pivoting of the feet and body. The real value of a left hook, besides the "kick," is that the left hand is so much closer to the opponent's chin than when the right cross is thrown, that naturally it is a quicker and easier punch to land. The right cross travels a considerable distance to contact the point of the opponent's chin, whereas the hook travels about a third of the distance and is a more deceptive punch.

As previously stated, the left hook is the most difficult of the punches to master, but strangely enough, I have found that working on the light punching bag is an ideal way to learn this punch. I shall never forget the experience and surprise of one of my boys the first time he tried a left hook in an intercollegiate match. He was an excellent boxer, but never had thrown a left hook. We had him practice the punch for three days on the light punching bag, two or three rounds each day. The night of the next match, he walked out to the center of the ring, feinted his left jab to the body, and then threw a left hook to the chin. His opponent dropped forward into his arms and the bout was over. Needless to say, he was probably as much surprised as his opponent, and was a convert to the left hook from that time on.

Illustrations 52-56 inclusive show the sequence of punches to be used on the bag to obtain the proper form and zip in throwing a left hook. Illustration 52, the left jab, hitting the bag straight ahead; Illustration 53, on the rebound, hitting the bag with the back of the left hand, with a rigid forearm; Illustration 54, on the next rebound hitting the bag straight ahead with the right cross; Illustration 55, the next rebound, hitting the bag with the back of the right hand, with the left in position to throw a hook.

In Illustration 56, the last of these practice punches on the bag, the boxer is coming across the side of the bag, with a loose, snappy left hook, thumb upward, and rigid forearm. The coach will find that a boxer, will at first, pull his left hook back too far before throwing the hook. This should be corrected, and the point stressed that the left shoulder is never pulled *back* or *lowered*, when the boxer is throwing the hook. It should be emphasized that the hook is a short, snappy punch, and enough power can be put into the punch without pulling the arm far back.

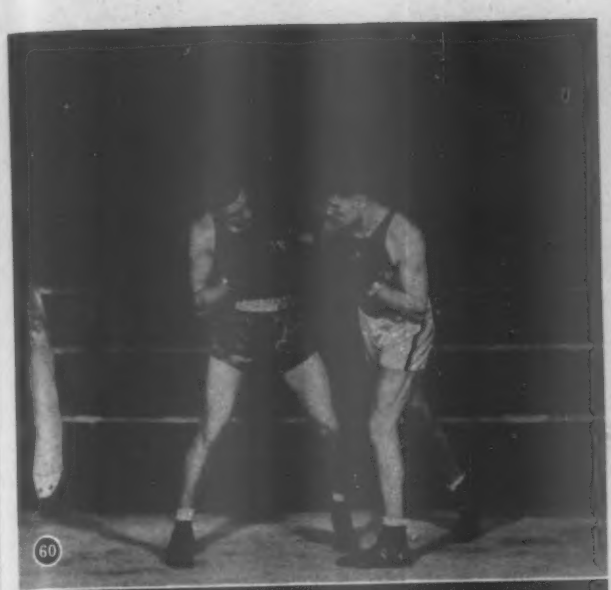
In addition to this practice of the left hook on the punching bags, the boys may be paired up the same way as when practicing the jabs and crosses to the chin and body. One boy does the punching and another boy does the blocking, with frequent switching around so that the boys learn both the punch and the block.

From the regular on-guard position, Illustration 57, the puncher (dark trunks), Illustration 58, practices throwing the left hook, remembering not to "telegraph" the hook by dropping the left shoulder or by pulling the arm back before throwing the punch. Note the blocker catches the punch right alongside his jaw with his glove, and moves *in*, not *out*. The natural reaction seems to be to pull away or out, from a left hook, and this is absolutely the wrong thing to do. If the blocker moves in, oftentimes the hook winds harmlessly around his neck (Illustration 59). Many times, however, the blocker (white trunks) gets a good chance, when moving *in* to counter with a right hand. The boxers have changed positions in Illustration 60, to give the reader a clearer view of a right-hand counter.

One-Two-Three—To the Chin

In Article IV (December issue) we learned the one-two punch, or the left jab and right cross to the chin. Now that we have mastered the left hook, we go into the next sequence of punches,

(Continued on page 14)


60

63

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64

62

65

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JOHN L. GRIFFITH, Editor

All-Age Groups in a Well-Rounded Physical Fitness Program

UNDER this heading in this issue we have attempted to give an over-all picture of what is being done to produce a physically fit nation. Along with the outstanding job done by industry in turning out munitions and war essentials, we may point with pride to what has been accomplished on the home front in the way of getting men in physical condition to meet the rigors of war. The schools and colleges, which are our immediate concern, have done a magnificent job. Every coach and physical education man should read with satisfaction Colonel Bank's comments and should be spurred on to step-up, to a greater extent, the conditioning programs in the schools and colleges.

It is impossible in the space that we have to cover, anywhere adequately, the whole field and to include all organizations that have contributed, and are contributing to a national physical fitness program. The few that have been selected well cover all-age groups. The Future Champions of America program takes care of the youngsters; the high schools, many of which are enrolled in the Victory Corps, provide for the teen-age group. The Legion baseball program provides for this group through the summer.

The Amateur Softball Association is rendering an excellent service to all-age groups, and the Industrial Recreation Association is meeting the demands of war conditioning in industry.

Our Future Physical Education Programs

RECENTLY our attention has been called to some remarks made by Socrates, Plato, and other learned gentlemen who 2,343 years ago discussed some of the matters that are now being discussed in our physical training circles. In Plato's Republic, from Book 3, "The Arts in Education," Socrates in talking with Adeimantus said: "Then, I said, a finer sort of training will be required for our warrior athletes, who are to be like wakeful dogs, and to see and hear with the utmost keenness; amid the many changes of water and also food, of summer heat and winter cold, which they will have to endure when on a campaign, they must not be liable to a breakdown in health."

From Book IV, "Wealth, Poverty and Virtue," Socrates says, "Then we may assume that our athletes will be able to fight with two or three times their own number?" Adeimantus replied: "I agree with you, for I think you are right!"

A splendid bulletin on physical training issued by the Eleventh Naval District with Lieutenant Commander L. W. Olds, U.S.N.R., officer in charge of the physical training staff, states: "Some record has been left by the early Greeks of the fourth or fifth century B.C. who made use of calisthenics for the conditioning of the athletes competing in the state contests."

Some of our educators who believe that Greek education forms the basis of our educational system have perhaps neglected to note that the Greeks placed a great deal of emphasis on athletics and that they used their formal work or calisthenics as a means of helping to condition the Greek boys for their athletic games.

We believe that the schools and colleges should promote more sports and try to get more boys into athletics. We believe, further, that the coaches should use calisthenics as the Greeks did, as a means of training the lads for their athletic contests.

The thought occurred to us the other day that several million boys in the schools and colleges of this country this last year trained for some inter-institutional contests. All of these lads came out for interscholastic and intercollegiate sports of their own free will and accord.

At the same time a great many boys entered the gymnasium classes in the institutions where physical training work of some sort or other was required. Very few, if any, of these boys took this work of their own volition but engaged in the class work because they were required to do so.

Our contention is that we give our boys in the schools and colleges the kind of work that they enjoy, provided this work produces desired results in as large a measure as does the formal work which is required and which in most cases is not enjoyed by the participants.

Dr. Seward Staley of the University of Illinois has for a number of years been suggesting that we get more boys into athletics. He announced some years ago that the boys who wanted to play soccer at Illinois should report at a certain time and some two hundred came out. Some of the boys who knew how to play acted as coaches of the different teams. Dr. Staley suggests that we add soccer, lacrosse, and other sports that are not universally found on the school and college programs and thus give boys a wider choice of the activities in which they will engage either of their own accord or as a means of meeting the requirements.

We do not agree with those educators who think that the child should only be asked to do the things

that the child wants to do. In other words, the reason why we are suggesting that the students of the future be allowed more latitude in their choice of activities is not because these activities are pleasureable. We do, however, hold that, if we are trying to condition men, let us say, for military service and these men can be conditioned through the medium of sports participation as well as through the medium of gymnastics and calisthenics, then by all means we would advocate that they participate in the things that brought them pleasure as well as the desired results.

The Next Twenty-Five Years in Education

RECENTLY Dr. Arthur B. Moehlman, Professor of Education, University of Michigan, in addressing the Rotary Club of Chicago, made this significant statement: "Whoever controls the schools controls the shape of things to come."

Educators are more and more wondering what education will be like after this war. The training that university professors are giving the men in the service, that is, the men who have been assigned to A.S.T.P. courses will not be continued after the war. This specialized training was necessary in fitting men for military service and we may be thankful that our colleges were able to convert their courses to suit the needs of the Army and Navy. After the war, however, we will undoubtedly go back to some kind of a program that will be more like the old program than the one that we have had for the last year and a half.

Who will decide what kind of education we are to have in post-war days? As Dr. Moehlman has indicated, if we can answer that question, we will know who is going to control the shape of things to come.

To go back a few years, we might consider who then controlled the schools. Undoubtedly they were controlled by the people in the local communities. We have been very much inclined to permit preachers the freedom of preaching the gospel in which they believed and teachers the freedom to teach those things in which they believed. If a teacher constantly insisted that some other country and some other form of government was superior to ours, the local people would inevitably sooner or later object.

What we are trying to say is that the schools were controlled locally even though we use the word "controlled" loosely, because there was seldom arbitrary control or domination, by the taxpayers over their local schools.

We have never adopted the idea that some national body should rule the schools by the exercise of remote control or by any other method. The national organizations have exerted influence but they have not had power to enforce their edicts. The Office of Education in Washington has had great influence over the schools and colleges, but Dr. Studebaker and his predecessors have never tried to dictate to the school authorities.

Of one thing we may be sure and that is this, that if the politicians finance the schools they will control them and if they control them they will, in the words of Dr. Moehlman, control the shape of things to come If matters are left to the local communities, our schools and colleges will continue to do something about making young America physically fit. Physical fitness programs, to the average American, mean sport programs. If the government controls the schools, it may be that universal military training in which boys of high school age will be sent to camp for a year or two and given their physical training while they are being trained for the Army will take the place of physical training that formerly has been given by the schools. We believe in military training and adequate military defense. We do not believe that military training should ever take the place of physical training, and neither do we believe that physical training should be a substitute entirely for military training. We had some excellent R.O.T.C. courses in our schools before the war and the training that the boys who are now fighting in this war received in those R.O.T.C. units was, without doubt, invaluable. If we send our 17- and 18-year old boys to military camps for a year or so, it will probably be true that we will not have military training in the schools and colleges, at least to any great extent. These are some matters which deserve our thoughtful attention.

We Need to Be Tough and Self-Sufficient

A RECENT book entitled "The Battle Is the Pay-Off" by Captain Ralph Ingersoll, presents very interesting observations of a man who was not militaristically inclined but who went into the army, took his basic training, was later commissioned as a captain and served in active duty with the troops in North Africa. We have not read anything along the same line that so clearly and without affectation presents the views of the boys in the United States Army in Africa and analyzes the basic principles of the military art so well as does this book.

We are especially interested in his emphasis on physical conditioning and with that in mind present the following quotes from this book.

"This is a process not of finding courage—there is enough courage to go round—or of learning the tricks of the trade of killing—men learn quickly on the battlefield. It is simply the process of our troops becoming tough and self-sufficient enough to get themselves quickly to the scene of action and to arrive there in the pink of physical condition.

"The principal problem of an army as well supplied as ours is the problem of its physical conditioning and learning to take care of itself on the field. And here is where the battlefield and the training ground meet and are one."

Referring to the Montgomery victory at the battle of Cyrenaica: "He put an army that was already supposed to be veteran through a physical conditioning program that equalled that of the commandos. And after that the Germans could not stop the Eighth Army."

High School Boxing

(Continued from page 11)

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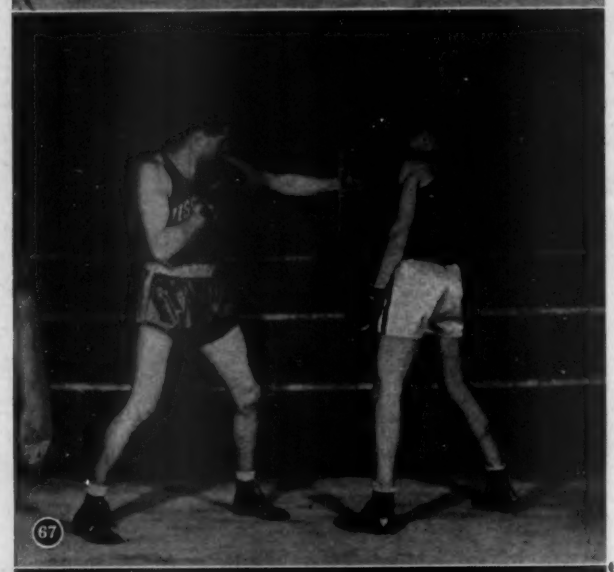
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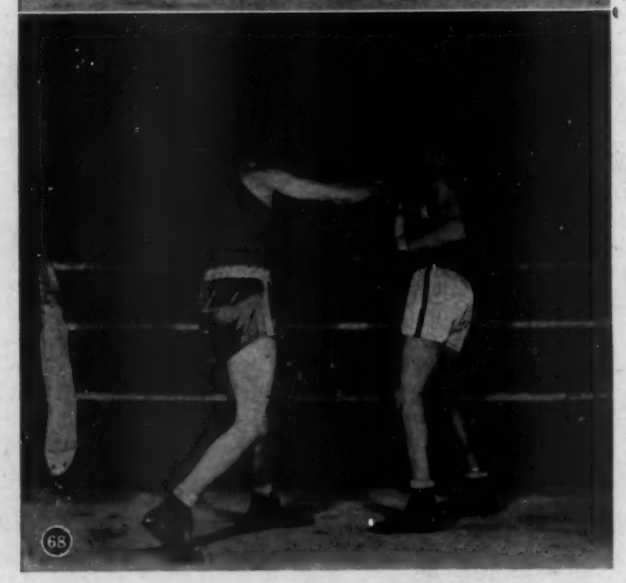
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or the one-two-three, to the chin; in other words, the left jab, the right cross, and the left hook. The following five illustrations demonstrate the proper technique to be used for both the puncher and the blocker.

Starting again from the on-guard position (Illustration 61), the puncher throws the left jab (Illustration 62). Note the blocker (white trunks), for convenience in practicing, drops his left hand, and catches the jab with his right hand.

In Illustration 63 the right cross (Number Two punch, the puncher (dark trunks) throws the right cross straight and sharp, inside, and has his left hand back into position, ready to let loose with the left hook. Note the left hand is carried high, around his face, both for protection and in the proper position to throw a fast hook without "telegraphing" it.

In Illustration 64, the left hook to the chin (Number Three), the puncher (dark trunks), zips over the left hook, loose and fast, in a half-arc movement, right to the point of the chin. The blocker has shifted his right hand from the left side of his chin, which was the place where he blocked punches One and Two, to the right side of his jaw to block the hook, and his head is bent *in*, not *out*. The coach should stress the fact that to learn to block is just as important as learning the punches. Note that the puncher (dark trunks) has brought his right glove back when his left hook is out, thereby protecting his own chin, in the even of a counter. Illustration 65, shows what happens when the puncher (dark trunks) forgets to draw his own right back to cover his chin. His opponent (white trunks) counters with a sharp right cross, and that one mistake may cost the bout because the puncher (dark trunks) became careless and did not protect his own chin. Boxers must always remember, when one hand is out punching, the other hand should be back blocking, and in position to toss another blow.

The preceding three illustrations provide very good practice for both punchers and blockers. These steps should be taken slowly at first until the boys get the rhythm and timing. Then, the tempo should be increased into the timing of one-two-three with no hesitation between punches. No one of the three punches should be emphasized; they all must be thrown loose and sharp, to be effective.

One-Two-Three to the Body

After a boxer has thrown a few one-two-threes to the chin, naturally his opponent will be guarding against another repetition of the same sequence. Usually the opponent, in his eagerness to block the left hook, will raise his right elbow up high enough to allow a left hook to be thrown to the body, hence we should practice the next sequence of one-two-three to the body. The following method should be used in perfecting this sequence.

From the regular on-guard position (Illustration 66), the puncher throws a left jab, (Illustration 67), moving into position for the Number Two punch, the right cross (Illustration 68). The puncher (dark trunks) throws the right cross, drawing his left hook back into position to be ready to throw the hook. Note the left hand is brought back high, the same as it was when the left hooks to the chin was thrown. This is necessary, again for protection.

The puncher (dark trunks) throws the left hook to the body, instead of to the chin (Illustration 69). For proper deception, the left hook must not be dropped down and then thrown; it must drop down to the opponent's body on the way over. Note the puncher has brought his right hand back to protect his chin against a possible righthand counter. The danger of a left hook to the body is the same as the left jab to the body, the boxer's chin is exposed to a sharp right-hand counter.

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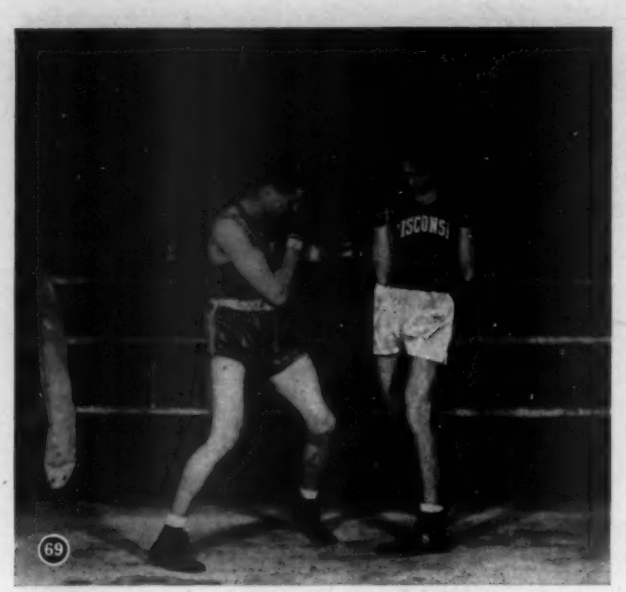

After a coach has carefully given his boys the few punches we have analyzed, namely the jab, right cross, and left hook, his job is done as far as fundamentals are concerned. From that point on it is only a matter of the boxer using variations of these three fundamental punches. Actually, the average high school or college boxer who has mastered the jab to the chin, a fair one-two, with an occasional left hook thrown in for good luck, will come out victorious in the vast majority of his bouts, without ever learning any further variations of the punches. For the benefit, however, of those coaches and boxers who wish some of the variations, I will include a few of the more simple and popular ones in my next and concluding article, which will appear in the February issue.

Note: The boxer in white trunks is Nick Lee, 1939 heavyweight N. C. A. A. runner-up, and 1940 N. C. A. A. champion, now assistant boxing coach at the University of Wisconsin. The boxer in dark trunks is Verdayne John, 1943 N. C. A. A. heavyweight champion, and winner of the Johnny LaRowe trophy for the most representative college boxer. He is now in the army A. S. T. P. program.

The last of the series of six articles on High School Boxing will appear in the February issue. Subscribers who wish the complete series should contact us at once.—EDITOR'S NOTE.

A Speeded-Up Basketball Program

By Howard G. Mundt

Basketball Coach, Carlton College

BASKETBALL practice at Carleton College has been greatly affected this year, due to a conflict in the use of gymnasium facilities. The gymnasium is in use almost continuously by the army units from 7:00 A.M. until 7:30 P.M. The Carleton civilian team must, necessarily, practice after 7:30 A.M. in a limited practice session of ninety minutes. Most boys on our squad, and all members of the starting five, besides having a heavy academic schedule under the accelerated program, work part time for their tuition. All of these boys are up at 6:00 A.M. every day and report to the school cafeterias and dining rooms to work until class time at 7:30 A.M. This heavy schedule makes it necessary for us to curtail practice, so that the boys may get sufficient rest and have some time for study. By constantly watching their weights and watching for signs of listlessness during practice, we can judge quite accurately if an individual is going stale.

With this necessary curtailment of practice, we have had to change our methods somewhat, in order to get the most out of the short time we are on the floor. The squad reports promptly at 7:30 P.M. and from then on everybody is kept moving practically every minute. The warm-up period in shooting takes twenty to thirty minutes. During this period individual weaknesses in form are corrected. During the last ten or fifteen minutes of this shooting period we have the boys pair off and shoot under pressure. Following in and rebounding are stressed constantly.

After our practice in shooting we start our drills. Some of those we use are diagrammed and from these we make our daily choice. Since the time element is so important, we sometimes may use only one drill, or even none at all, in order to get at something we think more important, such as two-on-two practice. Our practice sessions are outlined for each night, but we do not hesitate to make a change if deemed necessary.

In Diagram 1 we have the old two-line drills, the players coming in from both sides and cutting down the center. The drill is started near the center of the floor, so that a good hard drive is made. We like these passes made fairly high and then have the receiver keep the ball up to shoot from that position.

A variation of the same drill is shown in Diagram 1a. The man on the free-throw line executes a rear turn and passes.

Another variation is shown in Diagram 1b. One passes to 2, driving to the free-throw line, and follows his pass. Two executes a front turn and gives the ball to 1, who drives in for a shot. Two may keep the ball and drive in for a shot.

Another favorite drill is shown in Diagrams 2 and 2a with a line in each corner and one in the middle. We use both inside and outside screens in the drill. The options are numerous and the boys enjoy working out variations. This drill is valuable because of its similarity to game situations. In Diagram 2, 3 passes to 1 and goes around the outside. One passes to 2, who passes to 3, who takes the shot.

The inside screen is shown in Diagram 2a. Three passes to 2 and goes inside. Two passes to 1 who drives around the post to the basket. There are, of course, many other options possible.

The three-line drill, shown in Diagram 3, with the passer going behind the receiver is an excellent ball-handling and conditioning drill. After the group has traveled the length of the floor and taken a shot, the boys return to the starting point by running backward along the side line. The backward-running phase of basketball is important, as it aids greatly in defensive balance and maneuvering. This drill is used at every practice.

In Diagram 3a we have added a fourth man in the same drill. Four trails the play. After 2 has passed to 3, he cuts and receives a pass from 1. Two pivots and passes to trailer 4, who works into the drill.

In Diagram 4, we have the change-of-direction drill. Two passes to 1 and cuts toward the side line, changes direction and drives in front of 1 to receive a pass from 1 and goes in for a shot.

Diagrams 5 and 5a show the continuity of the Figure-8 drills, both from a three-out two-in and from a two-out three-in formation. These drills are also excellent conditioners, develop ball-handling, screening and are a valuable addition to any offense. The secret of a successful Figure-8 is not to make it a too obvious 8. Players should not run at the same speed, but must use a change of pace. After the

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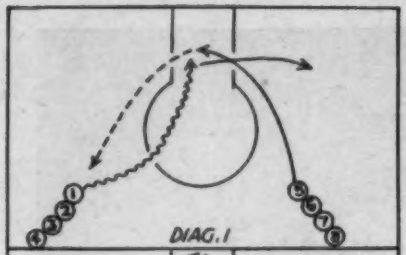
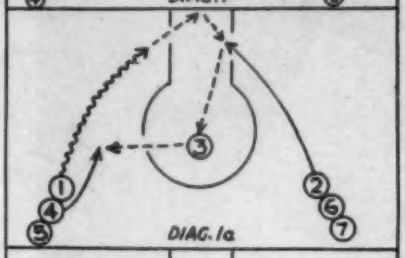
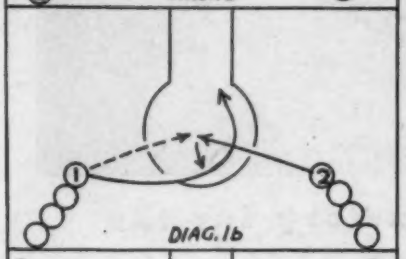
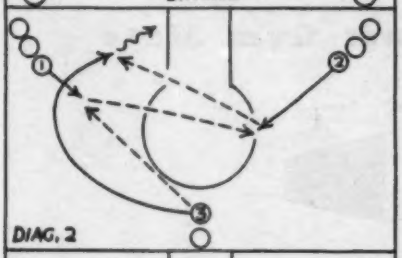
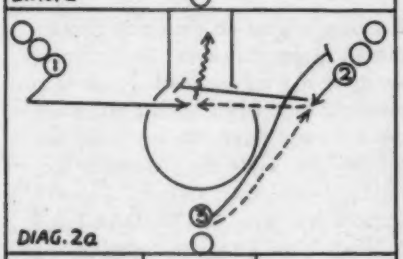
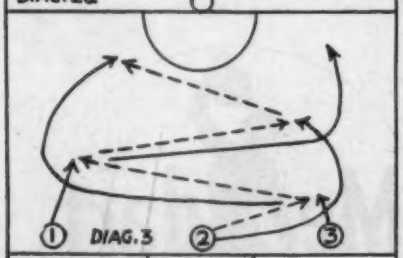


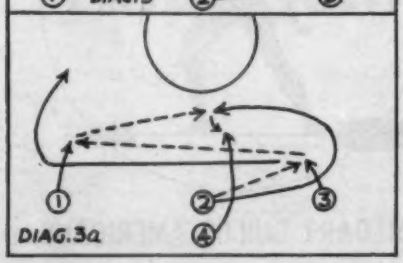












pass has been made, the passer should run hard for the basket. If he breaks loose, a return pass is made immediately. If he does not receive a return pass, he goes to the corner and comes up to meet the ball at a slower pace.

After the boys have had a vigorous turn at the drills, we stop and practice free-throw shooting, going on the assumption that free-throws are taken in the game, after a player has been running hard and is more or less tense. Corrections in form are in order at this time. All six baskets are used and individuals, not engaged in shooting free throws or rebounding, are working on ball-handling.

Then comes our work with one-on-one, two-on-two, etc., situations where screening, sliding, switching are practiced. This type of work is of the greatest importance and must be practiced continuously throughout the playing season.

Our offense, aside from fast breaking at every opportunity, consists of three patterns and their variations off the three-out two-in formation. We have two boys, one 6 feet, 3 inches and one 6 feet, 2 inches playing in. The shorter men play in the back line with a good ball-handler in the center starting most of the offensive maneuvers. These patterns are probably used by a good many coaches and teams and are not given here with any idea of a new contribution. They are, however, serving the purpose for our squad this year. They are simple but effective. To me the most important part of any offense is not the plays involved, but the drive, spirit and a will-to-win attitude on the part of the team members.

In Diagram 6, from the three-out two-in formation, 4 passes to 5 and blocks for 3. Five passes to 2 who passes to 3, going down the center. Five may also pass directly to 3.

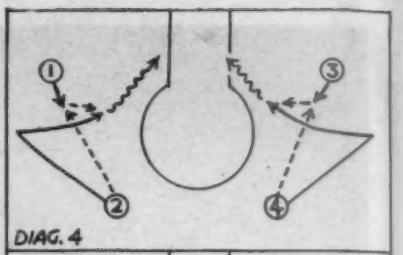
One variation is shown in Diagram 6a. One fakes to the side line and cuts around for a pass from either 2 or 5.

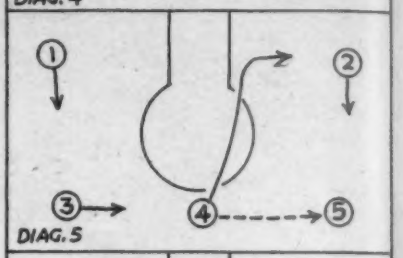
Diagram 7 shows two men going around the outside. Three starts, by passing to 1 and going around. Four follows the same path. One dribbles toward the free-throw line and has options of shooting or passing to either 3 or 4. If blocked, 1 passes to 2 or 5.

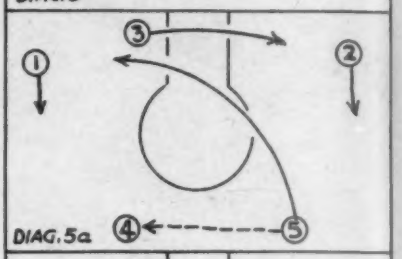
In Diagram 8, four passes to 5 and drives around 2, to receive a return pass. Two cuts across and screens for 1, who drives across for a pass from 4 and goes in for a shot.

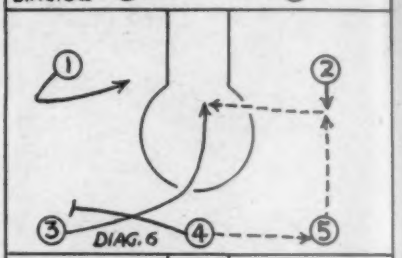
We use one center-tip play applicable to any position on the floor, but spend more time on out-of-bounds plays from the side and end lines. A few are shown in Diagrams 9-10-11 and 11a.

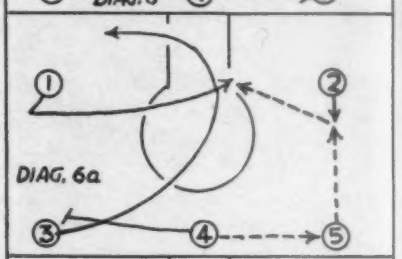
Diagram 9 shows an out-of-bounds play at the side line. One of the options is as follows. One passes to 3 coming in. Two comes up and screens for 1, who goes down under the basket. Five screens for 4 who cuts down the center. Three

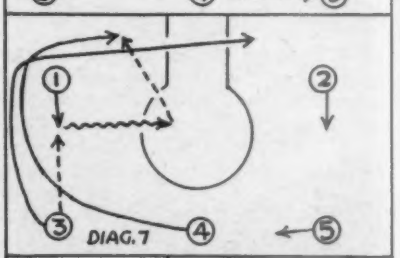


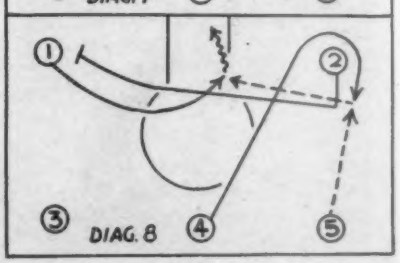


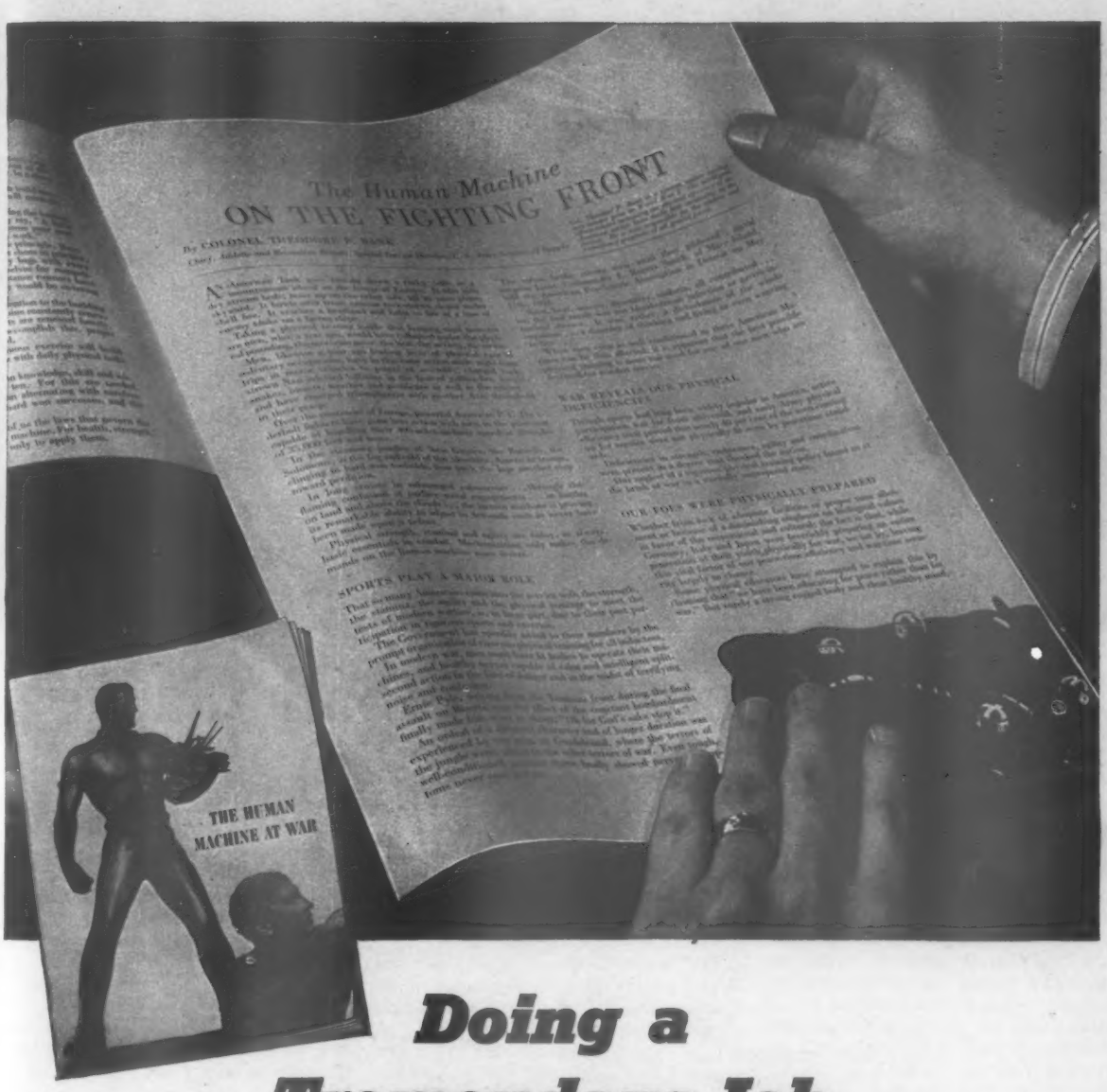












Doing a Tremendous Job

Since before Pearl Harbor we have been championing the cause of America's sports—fighting to have them recognized as a vital wartime asset to our country and our people.

Our new book "The Human Machine at War" sums up that campaign to date—puts it all between two covers in one concentrated, smashing punch. We believed this book would "do the job" for sports, and for you who are so intimately concerned with sports as an indispensable part of the American life we are fighting to preserve.

Over 25,000 copies of "The Human Machine at War" have been printed. We have presented copies to thousands of important men in government, in the Army, Navy and Air Forces, in industry and sports —and thousands have been requested by sports fans to date.

The response has been amazing. This book is doing a great liaison job for sports. It is converting thousands. It will add further to the conviction, now mounting higher and higher, that America's rugged, competitive sports must be a part of any program designed to train our fighters and our pre-induction youth—and to keep us a physically fit nation in peace as well as in war. Wilson Sporting Goods Co., Chicago, New York and other leading cities.

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Tune in Arch Ward's Sports Preview every Wednesday night, coast to coast over Mutual. See your newspaper for station and time. Sponsored by WILSON.

may shoot, pass to 1, four or 5. One may also pass directly to 4.

In Diagram 10, an out-of-bounds at the end line, one of a series that may be used from this formation, 2 and 4 screen for 3, who drops back and screens for 5. Five fakes his man to the side line and drives around for a pass from 1.

Diagram 11 shows a box formation with cross blocking which is effective. Two screens for 3, and 5 for 4. Three and 5 cut around and 1 passes to the player who is open. If all are covered, 1 passes to 5.

(Continued on page 34)

The All-Star Basketball Game

By Arthur C. Lonborg
Northwestern University

THE victory of the All-Stars this year was well earned and came only after a hard uphill fight. The practice time was short and the All-Star squad was divided into two squads, one working out at the University of Illinois under coach Doug Mills' guidance while the other squad worked out at Northwestern University. Otto Graham worked out at Northwestern but played with the other squad, due to Gene Vance's failure to secure leave from the service.

The offense of any All-Star team must be rather simple and especially was this the case this year, due to the short practice period we had.

The Illinois squad used the fast break plus a four-man mill. The four-man mill was based entirely on inside screening with the idea that a defensive man would be lost. The ball would be passed to the center man at any time with a break around C by the player passing in.

The play in Diagram 1 shows the type of play used in the mill. The men were, of course, not always lined up in the position shown. G3 passed to F1 who passed to C5. G3 inside-screened for F1 who broke around C5 as indicated. C5 returned the ball to F1 who either shot over or went on in for a shot.

The team that worked out at Northwestern was made up of five centers and used a set offense playing a possession game and a very hard rebound game.

The play in Diagram 2 was used by this team for many good shots and several baskets. The idea of the play was to have the three tallest men around the basket for follow-up work after the shot. G4 passed to F2 and broke outside F2 for a return pass. F2, after passing to G4 ran for the basket. C5 moved over to screen for F1. G4 passed to F1 who shot with F2 and C5 following up. This plus the pivot play and the inside screen as shown in Diagram 1 made up the offense of the All-Stars. While the plays were few and rather simple the execution of the plays was good.

The game again proved that control of both back boards usually makes the difference. The team with superior height usually wins, other factors being fairly even. The All-Stars used their height to good advantage both on offense and defense.

Both teams used a man-for-man defense, shifting only when necessary. The All-Stars did not have enough time to develop a defense, or even work very much on defense, so they had to rely on a man-for-man defense. Again control of the boards helped the All-Stars as the Washington Bears rarely got more than one shot.

The fine spirit, teamwork and a real desire to win were other vital factors in the success of the All-Stars.

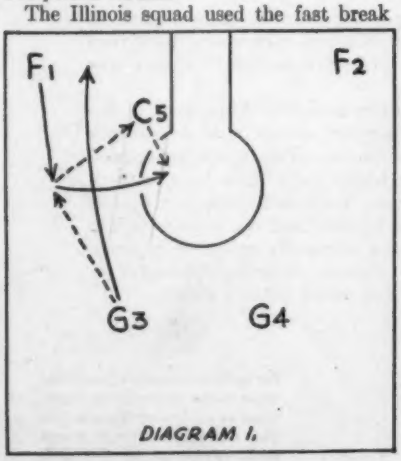


DIAGRAM 1.

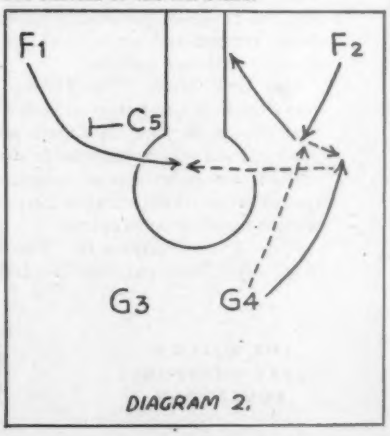
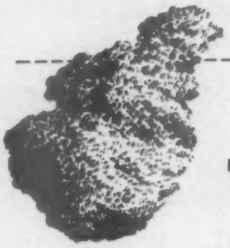


DIAGRAM 2.



The plain truth about synthetic rubber thread

The amount of publicity that synthetic rubber has had is probably the envy of every star in Hollywood.

Some of the stories have done good service . . . but it's too bad that others have created some false hopes.

Maybe we can clear up the question a little as it applies to athletic supports.

Only a few weeks ago synthetic rubber thread was released for a long list of civilian uses . . . and all over the country athletic goods dealers and athletic coaches envisioned an immediate flood of supports.

Sorry, it doesn't work quite that way.

RUBBER THREAD FOR *ANY* USE . . . IF . . .

The simple truth is that manufacturers *may use* synthetic rubber thread for practically *any* product . . . IF . . . THEY CAN GET THE RUBBER THREAD.

Before they *can* get it, it has to be made . . . and the plants that produce it have either been completely shut down or their staffs have been so reduced that it may be months before rubber thread is being manufactured in quantities even close to the demand.

RUBBER'S ONLY ONE SHORTAGE

And even if plenty of rubber thread *were* immediately available . . . there's a serious shortage of cotton thread with which to cover it . . . there's a serious shortage of people to man the production machines.

And even if these were licked . . . there's still the matter of plant capacity which is ample, normally, to take care of replacement supplies of athletic supports, but far too limited to supply the present tremendous demand quickly.

But these limitations are only part of the problem.

NEOPRENE IS DIFFERENT

Synthetic rubber is not like natural rubber. The method of fabricating it into webbing cannot be the same as was used for natural rubber.

Since natural rubber was restricted we've been experimenting with synthetics. We've learned a lot. We know now that Neoprene is, at present, the best synthetic for athletic supports. In some ways it's even better than natural rubber . . . some ways it's not as good.

We know now how to handle Neoprene in our fabricating machinery. We've learned all of the peculiarities of this new and different elastic. We learned it through good, hard research.

SUPPORTS WHEN?

Within a reasonably short time Bike Web will offer you athletic supports made of Neoprene webbing. They'll be good supports . . . in some respects better than those we've made before. They'll be built as perfectly as research can make them. They'll be better than supports made *without* the benefit of long careful experimentation.

They will *not* be ready tomorrow or the day after, and they will *not* be unlimited in quantity.

LOOK BEFORE YOU LEAP

We think you'd be wise to resist jumping at the very first products you may see in the market. We're sure you'd be money ahead to wait a few more weeks to be sure of getting Bike Web athletic supports.

Because we're not selling *anything* until we're sure it's right.

• • •

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Teaching Basketball Defense by the Question and Answer Method

By Cecil R. May
Basketball Coach, East High School, Aurora, Illinois

(Concluded from December)

Ques. If your team is playing a forcing defense, should you let your man get out of your reach at any time or part of the time?

Ans. Be in touching distance at all times. Be a "dancing" partner of your opponent.

Ques. When jumping against a team mate's opponent, should you check with the team mate to see that your team mate is watching your man or pay no attention to this point?

Ans. Remind your team mate to watch your free opponent.

Ques. What is the danger of following an opponent too close in the long-shot area and beyond?

Ans. The opponent beats you in toward the basket.

Ques. Does it show good or poor judgment to commit a foul out in the middle of the floor?

Ans. Poor judgment.

Ques. On a fast defensive break down the floor, should you try to find your man immediately, or wait until you get in defensive territory?

Ans. Wait until you get in defensive territory.

Ques. With the opponent's ball out of bounds on the end in the back court, should the defense play the opponent to block the pass or drop back and play two on one to break up a possible pass to a lone receiver in the back court?

Ans. He should play two on one.

Ques. Should you play the ball-handler so that he cannot get off a shot or should you let him start a shot and then bother him in the act of shooting, that is, in the long and semi-long shot?

Ans. In many instances, it is best to encourage shooting in these areas—"misses beget misses."

Ques. Will a fighter, an aggressive guard, foul occasionally or is it possible to be aggressive and not commit a foul?

Ans. He will foul occasionally.

Ques. Where is the best position on a rebound, behind your opponent, by the side of him, or inside, next to the basket?

Ans. Inside next to the basket.

Ques. Why keep the arms up?

Ans. They close up possible openings, show alertness, aggressiveness on the part of the defensive player and discourage initiative of the opponent.

Ques. How would you guard a ball-handler in the short-shot area?

Ans. Force the ball-handler to turn and tail the basket.

Ques. How do you play a shooter?

Ans. In the set-up and short-shot area, jump, go up with the shooter. Reach rather than swing at the ball, yell; try to disconcert him; try to interfere with the shooter's concentration. Stay on the floor in the long-shot area.

Ques. How do you get possession of a held ball?

Ans. Jerk quickly downward toward the floor, using a straight-arm action, by rolling the body in close and over the ball.

Ques. How would you aid a team mate when he is screened by your man?

Ans. Drop back so that your team mate can slide through.

Ques. What should you do when your team mate's opponent screens you?

Ans. Slide through b e t w e e n the screener and team mate.

Ques. What is the danger of switching players on defense?

Ans. Causes hesitation in choices, thus freeing an opponent.

Ques. When should you jump off of the floor to go after a shooter?

Ans. In the set-up and short-shot areas.

Ques. Should you ever jump off of the floor to block a pass?

Ans. No.

Ques. Which is the bigger "boner" to let your opponent score a long shot or a set-up?

Ans. A set-up.

Ques. Is it important to know whether your opponent is a right or a left-hand shooter?

Ans. Yes.

Ques. When your team mates' opponent is dribbling by you, should you take a swinging hack at the ball or reach in toward the ball?

Ans. Reach—never swing.

Ques. Should you try for a held ball, when the opponent recovers the rebound at your own basket, or should you breakfast on defense?

Ans. The nearest defensive player to the opponent's rebounder should go after the ball-handler to confuse him, and to take advantage of a quick possible misplay; you should drop back quickly on defense after this immediate aggression.

Ques. What is the primary advantage of a leg crouch?

Ans. Ability to move quickly without a preparatory movement.

Ques. If your opponent fakes the ball up, as if to shoot a high pass, should you straighten the legs to attempt to block the shot, or remain in a leg crouch?

Ans. Never straighten the legs. Remain in a leg crouch.

Ques. Should a shift or a glide across the floor be low to the floor, or a high jump for greater distance?

Ans. Low to the floor. Jumping too high is a common fault.

Ques. What is the most effective way to stop a fast-break offense, to stop it after it starts, or to converge on the first ball-handler aggressively to delay the starting of the first pass?

Ans. Go after the ball-handler hard, to force him to hold on to the ball to protect it. A slight delay is all that is necessary to stop a fast break.

Ques. What is the disadvantage of standing straight legged in guarding an opponent?

Ans. Inability to move with the opponent, a common fault of defensive players.

Ques. What is your cue as a defensive player at all times?

Ans. To maintain correct position on your man, to be between your man and the basket at all times, except when your opponent is on the extreme end.

Ques. What do we mean by "position on your man?"

Ans. Aggressive rebounding on the part of each player.

Ques. How should you play a ball-handler in trying to regain possession of the ball?

Ans. Reach, get in close before attempting to knock the ball out of the hands of the opponent. Never use long swinging hacks at the ball.

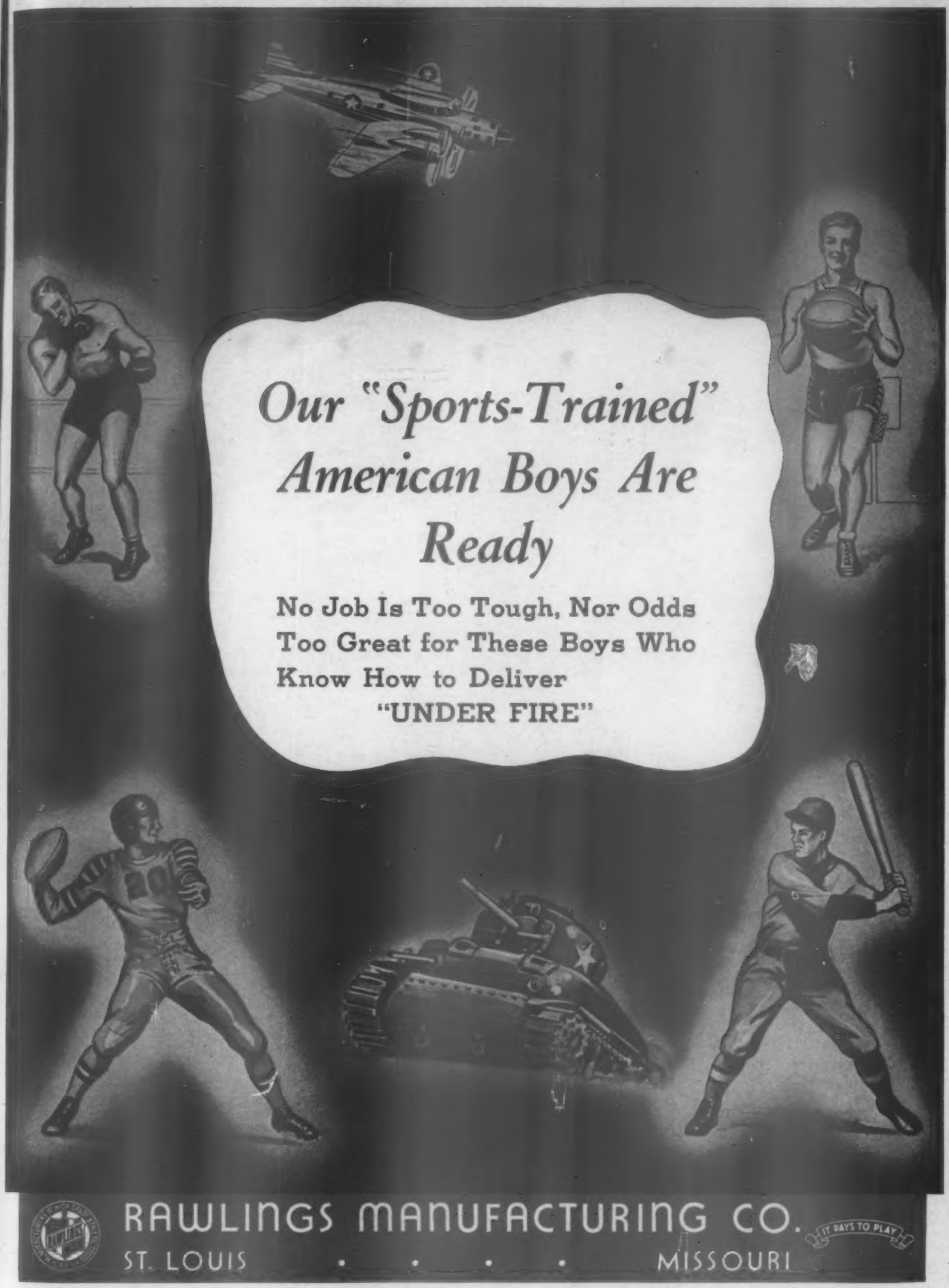
Ques. What should be your strategy in getting ready to jump on a held ball?

Ans. Always take a look at the position of team mates and opponents before jumping.

Ques. How should you rebound when opponent is inside next to the basket?

Ans. In close. Use a body-turning, cork-screw jump, turning your back toward the opponent at the height of the jump.

(Continued on page 35)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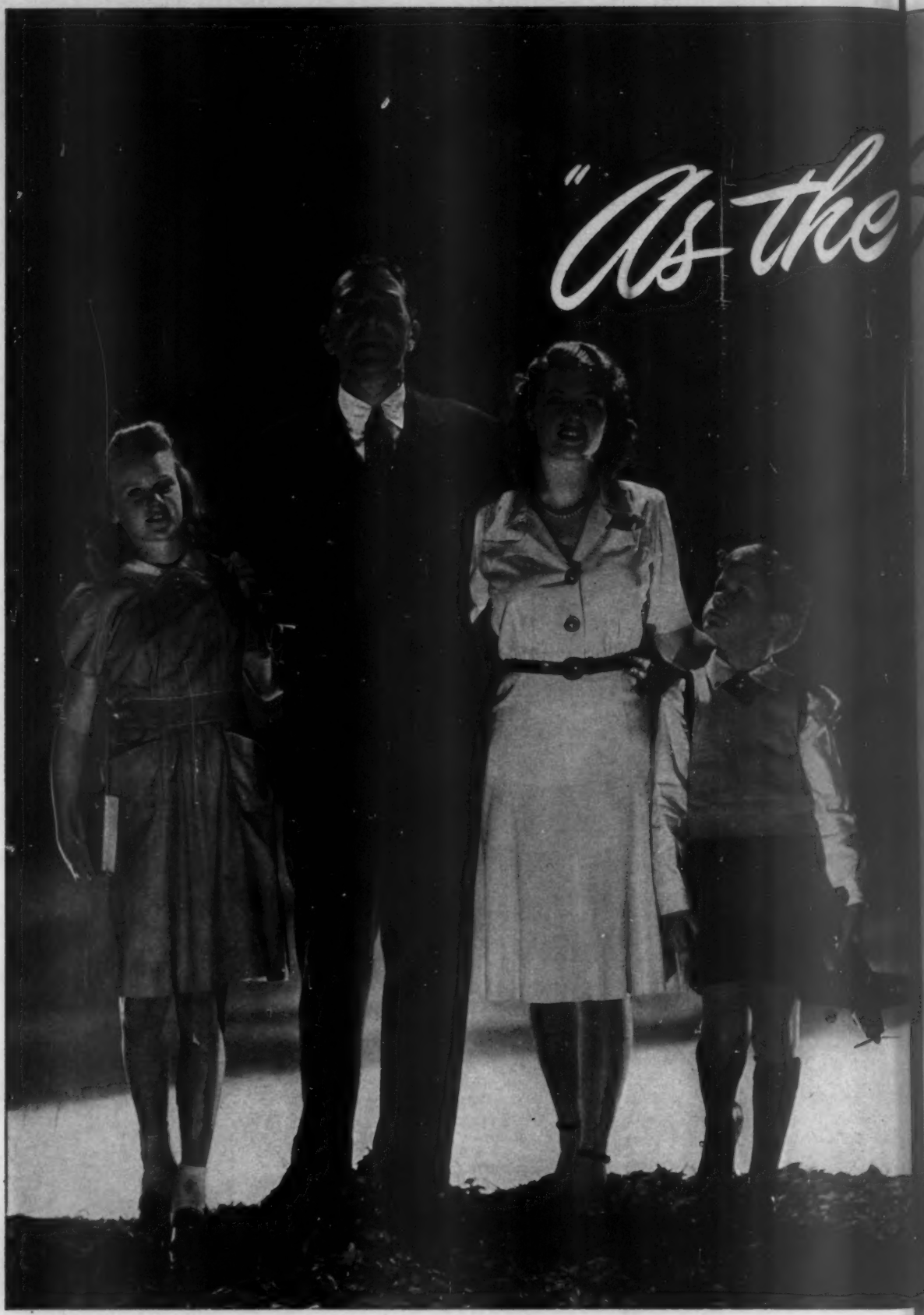
"As the

Sands Run Out"

As we turn our backs upon the Old Year—a year replete with Success and Failure, Hope and Disappointment, Faith and Disillusionment—let us resolutely face the New Year, confident in our Strength and Purpose—imbued with a fixed Determination to accomplish the Task of preserving and safeguarding for the Generations to come, our priceless Heritage—"that Government of the People, by the People, for the People, shall not perish from the Earth."

Goldsmith Athletic Equipment at present not available to you is doing double duty with the Armed Forces on the Home Front—on the High Seas—and in every far flung out-post of the world.

FOR VICTORY
UNTIL VICTORY
KEEP BUYING
WAR BONDS
Extra BONDS

All-Age Groups in a Well-Rounded National Physical Fitness Program

(Continued from page 7)

Yet the war to this point has been only a prologue to the main bout to come in 1944 and 1945. The marines battling from the Aleutians to the Solomons know this. The boys who fought in Africa and Sicily and up the toe of Italy know it also. No time now for false optimism and easy overconfidence.

Teachers and school officials of America must look at the facts—facts about the enemy and about our progress to date—and determine that they will not relax until the cumulative effects of sustained effort on both the war and home fronts shall have brought final victory. Until then, the high schools must carry on, with unflagging determination, their efforts to give youth the best possible preparation for their responsibilities in war time. That is what the High School Victory Corps stands for. That is why its active backing by the readers of this Journal is so important.

Mars Invades the High School

By H. V. Porter

LAST year's doubts about the ability and determination of high school administrators to maintain full sports programs under great war-time handicaps have disappeared. The schools have trimmed their programs down to essentials, have stepped up efficiency and are reaching more students with less man power and equipment. A Springfield, Illinois, high school reports actual participation in football by 350 boys and the only reason the number was not greater is that suits could not be provided for more. Hundreds of schools report that basketball is being played by three-fourths or more of the boys enrolled. Commando courses have been inaugurated and obstacle courses are found on the playing fields. Administrators who had settled down to swivel-chair supervisory pursuits have unlimbered to fill in gaps in the fitness training ranks. History and science teachers who had thought their coaching days were over, have heeded the call and are emulating tough top sergeants in building muscle, endurance and co-ordination.

Cross-country trips to distance contests have been eliminated. Undue extension of the activity of any small group in post-season games is being avoided. Emphasis is on participation by great numbers. After a couple of decades of "talking" a good fitness program, school men have finally united in a nation-wide effort to translate talk into action. At the recent National Federation meeting where thirty state high school associations were represented, the central theme was: "Extending Sports Participation to All Students." The pre-induction suggestions of Brigadier General W. L. Weible fitted this theme, as did plans announced by Dr. Frank Lloyd, Executive Officer of the National Physical Fitness Committee. The plans of the state athletic associations are being drafted to harmonize with this slogan. In each local school, the bulletin board displays, conversation in locker rooms and double-quick action in the gymnasium and play field are signs of the times. There is a renaissance in appreciation of the need for building attributes associated with physical strength and co-ordination. City Director David Snyder in Oakland, California; Health Director George Meade of Detroit, Athletic Director Kurt Beyer of Norwich, New York; Coach Comer Sims of Selma, Alabama—all announce stepped-up programs and new enthusiasm.

Schools use devices for making it the style to participate. Recently the state associations supplied 10,000 member high schools with material for a "Cavalcade of Sports" pageant to help popularize the fitness activities and to acquaint parents with the values and the need for adequate equipment, man power, and facilities. The state association magazines and nation-wide publications such as the ATHLETIC JOURNAL have accepted the challenge by enlisting the best editorial talent in crystallizing mass thinking into a form for action.

Opinions may differ about how much this work should be federally subsidized, but there is no longer any wide variation in beliefs as to values in the sports activities and in the drills and class exercises. All of them must be used. It is generally agreed that even with the use of all devices, the program still falls short of what can and must be done.

The task is big and time is short. Shipyard and air-factory methods are in use in the best schools. Each teacher is an expediter. Hampering obstacles and regulations are being eliminated. The job must be done. There should be an Army-Navy E for the school that turns out a high percentage of students who can meet necessary fitness standards in the limited available time. This is one of the few essential war activities that will have just as great value even if the war were to end tomorrow. No community or nation ever loses anything through giving attention to the physical fitness of its citizens. It is an investment which loses nothing by inflation or other economic stress. The leaders of the world of tomorrow will be those nations which are insisting on a high degree of physical fitness today.

The American Legion Junior Baseball Program

By H. L. Chaillaux
Director National Americanism Commission

THE American Legion junior baseball team sponsored by the Richfield Post No. 435 of Minneapolis, Minnesota, won the national championship at Miles City, Montana, on September 3 by a score of three to two over the Legion juniors from Springfield, Ohio. This final game was the climax to a splendid series in which five teams played for the title—Minneapolis, Minnesota; Springfield, Ohio; New Orleans, Louisiana; Flint, Michigan; and Whiteville, North Carolina.

Miles City, the host town, has all of the atmosphere of the old West. The boys on all visiting teams took on the traditions of the open range, wearing cowboy hats and all the loud shirts obtainable in the Main Street shops. Baseball enthusiasts staged a rodeo for the visitors and absorbed the spirit of each player, yet they rooted hard for their favorite team.

Junior baseball was started in 1926. Between 100,000 and 500,000 boys have participated each year. As high as 20,000 to 30,000 teams are enrolled annually on the sandlots of the nation. The boys play to local championships, then to state titles, and on through regional and sectionals to the national junior championship.

The cost of the entire program each year, including travel, food, equipment, umpires, et cetera, approaches $2,000,000. The major leagues of organized baseball help underwrite the national tournament expense to the extent of $20,000 annually.

More than one hundred and fifty Legion junior baseball boys are in the major leagues. Approximately three thousand were in the minor leagues when the war caused many minors to fold for the duration. Still other thousands have received athletic scholarships in universities and colleges.

The national junior champions each year attend the two opening games of the World Series as guests of The American Legion. The Minneapolis boys had a great time at this year's show at Yankee stadium.

Sandlot baseball has been responsible for the building of additional playground and recreational facilities in thousands of our communities. It is the largest nation-wide junior athletic program in the United States today. The plan under which junior baseball has been developed so successfully will now serve as a guide for a new community athletic program which

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See your dealer now... place your order early.

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PROGRESSIVE BASKETBALL
EVERETT S. DEAN
Stanford University
California
These are excerpts from many similar letters which were received in response to the reading of *Progressive Basketball.*
"I believe this book is the most clearly written of any in the field. The offense is applicable to any high school offense and is thoroughly explained and diagrammed; the defense is treated likewise. If a basketball coach were to have but ONE book, this should be it. It is complete, concise and not overdone."
JOE HUTTON, *Basketball Coach,* Hamline University, St. Paul, Minnesota.
"I have read your book on basketball and can sincerely say it is the finest book on this subject I have read. I am confident it will help both old and young coaches alike to improve their technique of coaching this great American game."
GEORGE BARSI, *Director of Basketball.* University of Santa Clara, Santa Clara, Calif.
Price $3.00 Postpaid
Everett S. Dean
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CALIFORNIA

the Legion posts will sponsor.

Almost 30 per cent of the eighteen-year-old boys being called for selective service are not able to pass the physical requirements for entry into the armed service. This condition must be corrected in the home community. The American Legion intends to help correct it.

A recent survey made to determine how many of the more than three million boys who have played American Legion junior baseball are now in the service indicates that upward of 90 per cent are serving. This means to us that they learned from baseball the necessity of keeping their bodies strong. Strong bodies and active minds will keep America safe.

Recreation, A War-time Necessity in Industry

By Ray Millard

Executive Secretary, Industrial Recreation Association

INDUSTRY has rediscovered the place of recreation in building employee physical fitness as well as its contribution to the safety and morale of the worker. Out of this rediscovery and to meet the requirements of industry for aid in the planning and conduct of industrial recreation programs, the Industrial Recreation Association was formed and its objectives established.

The need for action, through the medium of a nation-wide organization and its services, was demonstrated by constantly advancing knowledge of the subject of industrial recreation and its value to workers and management. From this, objectives of the organization were formulated and designed to:

1. Acquaint management with the importance of industrial recreation as a part of sound industrial relations.
2. Emphasize industrial recreation in periods of national emergency to achieve industrial unity, improve morale, skill and production.
3. Develop industrial recreation as a benefit to the community and improvement of industrial, labor and government understanding.
4. Study methods of improving industrial recreation programs.
5. Provide a clearing-house for ideas and dissemination of information on industrial recreation programs through bulletins and other media.
6. Aid members in the solution of recreation problems.
7. Encourage further study and research of industrial recreation.
8. Function in any manner beneficial to the industrial recreation movement.

Since 1941 when this group of mutually-interested individuals formed the Association, the membership has grown to include firms from coast to coast which are

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interested in the development of recreation as a sound industrial policy.

The Industrial Recreation Association was designed to be a service organization and is fulfilling that promise with many services to industry. Anticipating industrial needs and seasonal activities scheduled mailings are issued monthly, providing reviews of new ideas, developments, and suggestions on industrial recreation.

The primary Industrial Recreation Association objective is the production of manuals of procedure for use in providing adequate recreation of the correct type for industrial workers. New publications are produced as rapidly as time, experience, and research permit. The latest Association publication deals with solving problems arising in providing recreation for odd-shift workers.

The semi-monthly Industrial Recreation Association *Bulletin* contains ideas, news, suggestions on useful items of interest to those responsible for industrial recreation. Special issues cover subjects of vital importance. The *Bulletin* keeps the director abreast of the times and eliminates need for experimentation.

Constantly on the lookout for new problems and their solutions, trained research is frequently conducted to guide members in best procedures for dealing with new and unexpected developments. Reports on the recently conducted research dealing with "Women in Industry" will be published soon.

The Industrial Recreation Association sponsored section conferences and an annual meeting provide opportunity for the assembly of management, personnel, and recreation leaders to discuss and exchange ideas of mutual benefit. At the annual conference in New York in July, 1943, outstanding speakers and discussion groups covered many phases of industrial recreation's role in a country at war—its contribution to physical fitness, morale safety and such factors that are important in the production picture. Plans are being made for the 1944 annual meeting at the Edgewater Beach Hotel in Chicago April 4 and 5, 1944.

Because of its national character, the Industrial Recreation Association attracts the aid and co-operation of other groups interested in various phases of industrial recreation and related subjects.

Industrial recreation has opened a new field of endeavor for both men and women and the Industrial Recreation Association recognizing this, has assisted industry in securing deserving, trained individuals for the direction of recreation programs. Colleges and universities are recognizing the importance of the field, too, with an Industrial Recreation Section being created at Purdue University and other universities contemplating similar moves, with the idea of training young men and women for a place in industry as industrial recreation directors.

Emphasis is placed by the Industrial Recreation Association on physical fitness, which includes the "fitness within"—morale—for the industrial worker as an outgrowth of the recreation program. With the conclusion of the war and a shift to a thirty or thirty-five hour work week, increased leisure of workers insures the place of industrial recreation in industry.

Physical Fitness Via Softball

By M. J. Pauley

Executive Secretary, Amateur Softball Association

PHYSICAL Fitness. . . . Did any of us ever dig deep into the word to see just what it means or do we just take the two words and put our own interpretation upon them? I was one of those with my own interpretation and only just now took the trouble to see what Webster had to say about the two words. This is what I read: Physical, in this case means the body. Fitness has several meanings, but using it as we do, it means "becoming adapted with a certain end in view" or putting the two together I gathered, putting the body in physical shape for good health and a sound body.

Many sports and body-building agencies have their own and various ideas as to just which is the best way to attain this physical fitness, and we, of course, are no different. We think our game of softball is the best, and the best not only for youth (boys and girls) but the aged. In St. Petersburg, a member of our affiliated Florida Association, there are four teams of men. Two are what is known as the three-quarter century clubs. The oldest member of either team is Colonel West who is eighty-seven years of age, and the youngest member is seventy-seven. Their bat boy is fifty-one. These two teams, known as the Kats and the Cubs, play each other at least three times a week, full seven inning regulation (as per the book) games. This same Florida Association also boasts of two half-century softball teams whose youngest member is fifty years of age.

But, now, as I look out of the window in my home toward the school playground, across the street, I see the gymnasium teacher of the Coles elementary school umpiring a game between the boys of her class, and the girls, the oldest of either, probably, cannot be over nine or ten years of age.

These two age-groups support our claim that softball is the best way to attain physical fitness. What other sport, or what other exercise can a man or woman, a boy or girl begin at the age of nine or ten and continue on throughout his, or her, entire span of life? We know of none.

We think a word here about our International Association and what it does to promote physical fitness might not come amiss.

The renowned sports authority, Mr. Menke, whose sport record book is the bible of every sports department in North and South America, gives our game and bowling the largest single sport participation in the world. We have forty-eight affiliated state associations, twelve metropolitan (cities of over 500,000 population) associations which are not a part of the state organizations, as in Illinois we have the Metropolitan Chicago Amateur Softball Association, and in the state exclusive of Chicago, we have the Illinois Amateur Softball Association. Each year our affiliated states, after the various recreation departments have completed their summer league schedules, conduct district, state and metropolitan championship tournaments and play down to a champion. This state and metropolitan championship team then goes into regional championships. The regions correspond to the army corps areas. The regional champions are eligible, and compete in the current year's World's Amateur Softball Championships (boys and girls).

Our state associations are each divided into eight or more districts with a district commissioner in each, appointed by the A. S. A. State commissioner. The state or metropolitan commissioner is selected and duly appointed by the A. S. A. Executive Board. The district commissioners of a state are formed into a state association which becomes affiliated with the international body of the A. S. A.

The provinces of Canada and the countries and holdings in Central and South America all have duly appointed A. S. A. commissioners who affiliate with the A. S. A. much in the same way as state associations, with their champions being eligible in softball's world's championships.

In 1943 our United States group conducted softball in the service camps, at no cost to the camps. Each camp conducted a regular A. S. A. softball tournament and arrived at a champion. This champion was then invited into the association tournament of the state in which the service camp was located. A grand total of 67,000 teams with 804,000 men participated. Each camp winner was given by our association a camp championship trophy and a set of twelve sterling silver medals, if there were more than twenty-four teams in their tournament. If there were less than twenty-four teams in the tournament, we gave only a set of twelve sterling silver medals. These awards were made possible by the Coca Cola Company, whose public relations director, W. G. Kaliska, ably assisted us with the participation championships.

The service camp program was so successful that a similar program was tried out in the high schools through the medium

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Conforms to all U. S. L. T. A. specifications

Performs like the best pre-war balls

New CHAMPIONSHIP TENNIS BALL OF SYNTHETIC RUBBER

● We bring you the best tennis news since the Japs cut off our rubber supply. This new Wilson "Championship" is made with the new-type of *Synthetic Rubber—man-made rubber*—a product of never-failing American ingenuity.

And this new Synthetic Rubber makes *some* ball. We've put it through the toughest laboratory tests. It has also been put through the "star" test by such great tennis stars as Budge, Bobby Riggs, Alice Marble, Mary Hardwick and others. And results show that its performance equals the best pre-war natural rubber balls. Meets all U. S. L. T. A. requirements.

Try this new Wilson Championship Ball of the new-type SYNTHETIC RUBBER, at your first opportunity. See how you rate it. Dealers are now being supplied. Wilson Sporting Goods Co., Chicago, New York and other leading cities.

These Great Players Were Amazed

When Don Budge, Bobby Riggs, Alice Marble, Mary Hardwick and other expert players started to smash the NEW Wilson SYNTHETIC RUBBER Tennis Ball around they were very much surprised. Not one of them expected the new-type *Synthetic Rubber* to measure up to the pre-war balls. But it DOES. And what was proved on the courts was confirmed most emphatically in laboratory "bounce" tests. This new Wilson SYNTHETIC RUBBER Ball has what it takes to make a real "championship" tennis ball. Try it and see.

Players mentioned are retained on Wilson's Advisory Staff.

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EVERY WEDNESDAY NIGHT
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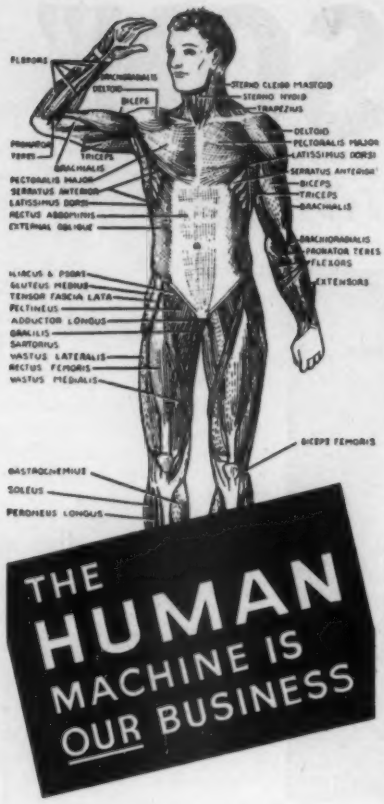


THE HUMAN MACHINE IS OUR BUSINESS

OUR factory is unique in American war-time industry. Some factories make guns, planes, tanks—the machines of war. But, our business is the HUMAN machine . . . For many years American children have spent countless happy hours on Porter-equipped playgrounds—and in Porter-equipped gymnasiums and swimming pools. Now grown up, many of these youngsters serve on battlefronts, thankful that far-sighted educators and social leaders provided for their physical development in childhood and in youth. . . . Come V-Day, Porter will again provide America's schools, clubs, parks and playgrounds with America's finest physical fitness apparatus. Meanwhile, almost all our production is for the U. S. armed forces. . . . The WPB, however, has approved release of some gymnasium items to schools with physical education programs approved by the U. S. Office of Education—in order that American children today may be made strong for tomorrow. - List on request.

Makers of the famous "Spalding," "Chicago" and "Louden" lines of gymnasium, playground and swimming pool equipment.

Our 76th ANNIVERSARY

THE J.E. PORTER CORPORATION
OTTAWA, ILLINOIS

of this publication, with the Coca Cola Company again giving the awards. Approximately one hundred thousand high school boys and girls participated, with an award given each school's boy and girl champion.

This program was purely intramural, thus meeting the requirements of the various state high school athletic associations. Tournament suggestions, the Amateur Softball Association Guide with Playing rules and brackets and sterling silver awards, provided by the Coca Cola Company, were furnished all schools upon request.

More than 300,000 softball teams participated in our civilian program, a great many of them representing industrial organizations. Bear in mind that 300,000 teams mean three million, six hundred thousand boys and girls in civilian life who made softball their physical fitness program.

It may be that we are wrong, and if we are we will readily admit it, but when we total our 1943 participation of 804,000 service men, 100,000 high school boys and girls and 3,600,000 civilians—a grand total of four and one-half million participants—we feel that we are justified in saying that softball is an intricate part of the physical fitness program of our country in war time. Moreover, it will continue long after this great struggle of right or wrong has been settled and forgotten.

Your Future Champions

Carl L. Nordly

Associate Professor of Physical Education
University of Minnesota

IN OCTOBER, 1943, General Mills, Inc. announced *The Future Champions of America* program. It has three main objectives: first, to stimulate participation of boys and girls up to sixteen years of age in wholesome leisure-time activities; second, to improve the physical fitness of boys and girls, and third, to develop ideals of fair play and sportsmanship. These are worthy objectives in peace time as well as in war time.

To accomplish the stated objectives the Jack Armstrong radio program has been used as a clearing house for F.C.A. announcements and 200,000 copies of *The Future Champions of America* manual have been published. In less than two and one-half months more than one-half of them have been distributed without charge.

The mechanics of the F.C.A. plan are simple. Teams of eight members comprised of boys alone, girls alone or boys and girls are formed. The boy or girl who writes to Jack Armstrong, Minneapolis 15, Minnesota and includes his name and address, together with the names of seven team mates receives one manual for his team's use and sufficient insignia for each member of his team. The youngster who writes is the team captain by virtue of his demonstrated initiative.

The team members select a coach who may be a parent or friend of one of the team members, an athletic coach or teacher in another phase of the physical education program, a leader of boys' or girls' activities in a settlement house, a physical director in a Y.M.C.A. or Y.W.C.A., a club leader, an outstanding athlete in high school or college, et ceteras.

Cognizant of the objectives of the F.C.A. program, many adults, including the membership of entire service clubs in some communities, have taken the initiative by organizing teams and volunteering to serve as leaders. Superintendents of schools in large cities have arranged for meetings at which The Future Champions of America movement has been explained to P.T.A. members, principals and physical education teachers. The program has been endorsed and encouraged by leaders throughout the nation interested in the welfare of youth. Schools and other private and public agencies are supporting the organization. Furthermore, many neighborhood teams have been formed. That is one of the most encouraging and appealing features of the organization.

Briefly, the program of the F.C.A. is designed to encourage boys and girls to improve their performances in three physical fitness tests, a variety of sports events included in the manual and in other activities selected by themselves and their coach. Friendly *competition* with other team members and other F.C.A. teams in the tests and various sports is suggested throughout the manual.

Each member of a Future Champions of America team receives an attractive emblem which identifies him in the national organization. These insignia may be sewed on snow suits, sweaters or athletic shirts. Stars are added to the insignia as the team captain certifies that standards of performance have been attained in the tests. Thus, team members are motivated to attain peak performances.

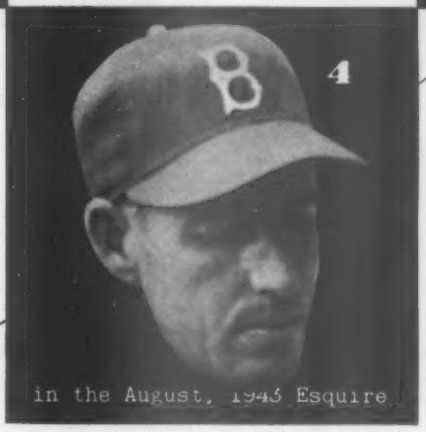
Leadership opportunities are distributed as the boy or girl who is best in a particular activity (dashes, football punt, free throwing, etc.) serves as leader or captain of the team when the group participates in his or her specialty.

Included, also, in the manual are ten F.C.A. training rules similar to those which you may recommend to your players and nutrition information with the chart illustrating the basic seven food groups. The manual thus serves as a desirable connecting link between the school or other public or private agency concerned with fitness and the homes of children or youth for whom agency programs are conducted.

The pictures of national champions and All-Americans together with their statements on how to become champions in their various events comprise one of the

people are talking about...
people are talking about...
people are talking about...

1. LIEUT. TOM HARMON *former All-American star now in the Army Air Corps in China, shows how grid training prepares a man for air warfare.*
2. ABE SIMON *contender for the heavyweight championship, warns against jarring and hard punches as fatal to a fighter's brain.*
3. BEN HOGAN *number one money-winner among golf Pros, says that anyone can learn golf by "feel"—and he demonstrates how it's done.*
4. WHITLOW WYATT *pitcher for the Dodgers, gives the lowdown on "beaning," outlawed sport of pitchers.*



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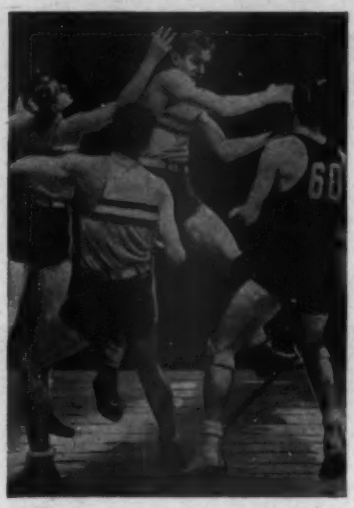
THE LEADING GENERAL MAGAZINE ON SPORTS — Esquire

THEY'VE WON THE GAME FOR YOU

Have you won the game over Athlete's Foot Control for them?



• They're off to the showers—and perhaps to the army of different species of fungi causing Athlete's Foot. Protect those who use your showers and dressing rooms by using the Dolge method of Athlete's Foot Control.

Alta-Co Powder—one pound dissolved in a gallon of water and placed in strategically placed foot tubs—will combat the spread of Athlete's Foot. It has multiple advantages:

(1) Kills all different species of fungi and their tough spores.
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For scientific Athlete's Foot control

DEATH TO DISEASE DOLGE

Alta-Co POWDER

The C. B. DOLGE Co.
Westport, Connecticut

most attractive phases of the thirty-seven page manual. Famous athletes have urged youngsters to develop skills and the will-to-win at an early age, train faithfully and practice diligently and frequently.

Doubtless, the reader of this article has wondered what he can do about the F.C.A. program. *First,* may I suggest that you form one team. I have done so and am enjoying the experience. The team includes eight girls in the neighborhood. At present they are interested in skating. The last two mornings I have driven them about a mile from their homes to a skating rink while enroute to my office. Many enjoyable hours have been spent with them on Sunday afternoons. *Second,* you can encourage your athletes and leaders in physical education activities to organize teams in their neighborhoods. Leadership is necessary to help the youngsters. *Third,* you can organize F.C.A. teams in elementary schoolrooms if you are a city supervisor of physical education. Many teachers have all of their pupils organized into F.C.A. teams. County superintendents of schools have asked their teachers to assume leadership in the organization. *Fourth,* if you are a member of a social or civic organization in your community you can present the F.C.A. plan to the membership and encourage organization sponsorship with each member organizing and coaching a team.

The Future Champions of America is not a transitory program. It is needed NOW and will continue after the war. America needs more sports loving children and adults, a nation as physically fit as possible and more youngsters who will seek outlets for their interests in worthwhile competitive sports rather than in unsocial activities.

The N.C.A.A. Speaks for the Colleges

THE National Collegiate Athletic Association for three years has consistently advocated the full use of athletics in the American colleges as a training for war. The first action was that taken by the Executive Committee in September, 1940. This was followed up in successive meetings in which the N.C.A.A. was definitely put on record as believing that athletics are an asset to our nation in time of war.

The Executive Committee in session January 6, 1944, passed the following resolution:

The National Collegiate Athletic Association, with a membership of more than two hundred colleges, universities, and intercollegiate athletic conferences, reaffirms its policy of encouraging the continued development of competitive athletics as a vital element in the training of young men for service in the armed forces of the United States. At the beginning of the war our member institutions pledged their facilities and staffs to the war effort, to be used as completely and effectively as national authorities found possible.

We believe the experience of the last year has confirmed the practical wisdom of that policy, in that the armed forces have made effective use of the facilities and staffs of many member institutions.

We believe that continuation of competitive athletics throughout the period of the war is vital to the total training of the individual.

We believe that competition is an essential element in any effective program of physical training and recreation.

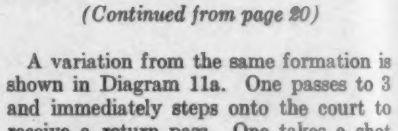
We believe that additional use of existing facilities and staffs can and should be made in order to include all elements in our collegiate institutions in competitive intercollegiate and intramural sports.

We believe that competitive sports are an integral part of American life in time of war and in time of peace and, therefore, that we have an obligation not only to expand the present uses of our facilities, but to prepare for the period following the war when new problems must be faced.

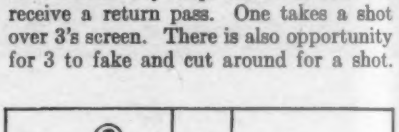
A Speeded-Up Basketball Program

(Continued from page 20)

A variation from the same formation is shown in Diagram 11a. One passes to 3 and immediately steps onto the court to receive a return pass. One takes a shot over 3's screen. There is also opportunity for 3 to fake and cut around for a shot.

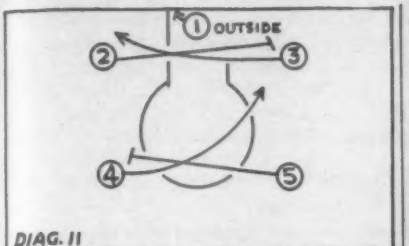


DIAG. 9

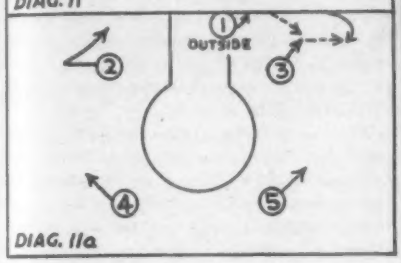


DIAG. 10

This outline of practice in a shortened time period is not given as a cure-all for basketball ills, but it may serve as a suggestion to someone in the same predicament regarding time element, gymnasium facilities and a good share of inexperienced material. With a shortened



DIAG. II



DIAG. IIa

period, we must work less on some aspects of the game.

In conclusion, may I say that no matter who the coach, there must be some basketball material with which to work, regardless of the type and method of practice sessions.

Teaching Basketball Defense by the Question and Answer Method

(Continued from page 22)

Ques. How may you effectively recover a ball from a ball-handler?

Ans. Use an *underhand* reach. Get in close before trying to knock the ball out of the hands of the opponent.

Ques. What mannerism or posture may you assume to worry and bother the ball-handler?

Ans. Use a pointing finger directed toward the face of the ball-handler or use your voice.

Ques. What area of the floor should require a *close play, exacting position* on the part of the defensive player?

Ans. A radius of fifteen feet from the basket.

Ques. In what area is it safe and effective to jump off the floor to bother a shooter?

Ans. Short-shot and set-up areas, anywhere within fifteen feet from the basket.

Ques. In what area should you stay on the floor and never leave your feet to guard a shooter?

Ans. In the long-shot area.

Ques. What is the primary weakness and fault in acquiring the habit of maintaining a good defensive position?

Ans. Watching the flight of the ball, to play the ball rather than the man.

Ques. What is the advantage of the Question and Answer Method?

Ans. It emphasizes fine points.

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All other games must stop until the day when we have won the greatest contest of all. The boys who have played over our sports nets in the past, are now fighting under them, and it is up to us to keep them covered and safe. Definite improvements in "INVINCIBLE" nets, born of intensified research of war time production will bring a great advancement in the quality and design of our sports nets line in the Post-War period to come. However, until victory is assured, R. J. Ederer Company will continue to turn their full sports nets resources and facilities over to military needs and the winning of the game of war.
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Home Office: 540 Orleans St. Chicago, Ill.

1943 Notes
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The system of play as used by **COACH ADOLPH RUPP** of the University of Kentucky. His double pivot attack. The type of play as used by **COACH GLENN CURTIS** of Indiana State, featuring his "SPOT" game. The speed game of **COACH MURRAY MENDENHALL** of Central High School, Fort Wayne, Indiana, Champions of 1943. Fundamental drills, continuities, and out-of-bounds plays, by **CLIFF WELLS.**

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Fit to Fight

By Brigadier General Walter L. Weible
Director of Military Training, Army Service Forces

An Address Delivered Before the National Federation of State High Athletic Associations

THOSE of us charged with responsibility for military training in the Army Service Forces have the task of developing inductees into efficient fighting men as quickly as possible.

Given every advantage, our job is still a difficult one because of the complicated nature of modern war. This is a technical war, in which 90 per cent of our soldiers must fill assignments requiring some degree of specialized knowledge or skill. They must fly planes which can be kept in the air only by the efficient functioning of hundreds of expert technicians on the ground. They must operate tanks whose giant engines, revolving turrets and delicate gyrostabilizers challenge the skill of the ablest technicians. They must fire guns whose accuracy and speed are controlled by mechanical and electrical instruments but little less complicated than those in the plane and tank. They must operate radios, telephones and teletypes.

Add to this the pressure caused by the demands for speed and you arrive at some conception of our difficulties. We are competing against enemies who have spent years in training their youth and adults to fight. To overcome this handicap, every minute of our training time now must make up for the years of delay in beginning our own preparations. Every hour of prior training is an hour saved from the previous time required to develop a civilian into a soldier ready for combat.

The speed and efficiency with which we can do our job of post-induction training is largely determined by the proficiency of the inductees when they come to us. We can train them more quickly and effectively if, when they reach us, they possess an appreciation of the cause for which we are fighting; a general understanding of the nature of military life; a mastery of simple communication and mathematical skills; and a background of technical training or experience which will be useful in some specialized army job.

It is *important* that inductees possess these qualifications; it is *essential* that they be physically fit.

I welcome the opportunity of discussing this *essential* prerequisite of military training with you who have done so much to encourage and promote physical fitness among the youth of the nation.

Although I shall confine my remarks to a discussion of the need for health and physical fitness as it relates to army training and combat duty, I would like to mention, in passing, that thousands of potential soldiers never reach us, because they are rejected by local selective service boards or induction stations for physical deficiencies. At a time when the Selective Service Administration is literally "scraping the bottom of the barrel" for men to meet our army quotas and to replace the casualties which must inevitably come as the war progresses, we are denied the services of over two hundred in every thousand available men between the ages of eighteen and thirty-seven, because they are unable to pass the required physical tests. The physical deficiencies of many of these rejects might have been avoided or corrected through proper attention in earlier life.

What specific qualities of physical fitness are of most assistance to the soldier in training and in combat? They may be summarized by the following definitions and situations.

Endurance—Prolonged physical exertion without excessive fatigue. The soldier's day at a typical replacement training center begins with "First Call" at 5:45 A.M. and ends with "Taps" at 10:00 P.M. And this day of sixteen hours is still too short to include all the class work, drill, calisthenics, hikes, and other activities expected of him. In combat he may have days when he must march twenty miles with a forty-pound pack on his back, swim swollen rivers, and climb rugged mountains. Whatever his schedule in training or his mission in combat, you may be certain that he will need physical endurance in abundance.

Muscular Strength—The ability to lift, push, or pull heavy objects. An army truck axle, deep in the mud, must be lifted out and sped on its way. Machine guns, mortars, and bazookas must be carried to firing positions. Monstrous shells must be lifted into the chambers of guns. A scout must climb the highest tree in the woods. These and thousands of army jobs like them require sheer physical strength.

Agility—The ability to handle one's body quickly and efficiently. An enemy tank is speeding through the woods. Enemy snipers, concealed in trees throughout the forest, eagerly await the appearance of a human target. Enemy artillery shells are whistling overhead. A soldier's ability to roll quickly away from the approaching tank, to dive into a foxhole, to dodge from tree to tree, to hurdle a stone wall, may some day save his life.

Speed—The ability to move rapidly. An enemy pillbox is two hundred yards ahead. Before it can be neutralized, we must move closer in so that our machine gun and rifle fire will be more effective and so our flame throwers and hand grenades may be employed effectively. The speed with which the movement is made and the rapidity with which the guns are set up in their new positions may determine the success or failure of the mission.

Flexibility—The ability to turn, bend, and twist the body into unusual positions and movements. Lying on his stomach, the soldier sees his objective in the distance. Before he can get there he must worm around logs, dodge land mines, roll into shell holes and squirm through a seemingly endless maze of barbed wire. And enemy machine guns are laying a steady sheet of grazing fire immediately over his head. To negotiate the intervening terrain, he must execute many body movements resembling those of a professional contortionist.

Posture—The ability to maintain one's body in correct positions, healthy, alert and ready for action. On the parade ground, in the classroom, on the street—everywhere a soldier is judged by his posture and military bearing. Posture has a direct relation to alertness.

Relaxation—The ability to avoid extreme and unnecessary tension before, during, and after, periods of alertness and strenuous activity. There are few intervals for relaxation in the heat of battle—every man must be "on his toes" while at his duty station. But, when there is a lull in battle, or when replacements give him temporary relief, he must have the knack of relaxing quickly and completely, so that he may be refreshed for whatever task may lie ahead.

Fighting spirit—Securely entrenched in concrete placements, protected in front by the open sea and a beach strewn with land mines and barbed wire, guarded overhead by an umbrella of airplanes, supported in the rear by heavy artillery, the enemy awaits our attack.

Our men approach the beach in small boats. With rifles, ammunition, and a minimum of equipment, they go overboard and plunge through the surf into the deadly fire of the enemy. They weave their way across the bullet-swept beach, storm the enemy fortifications, drive the foe inland and consolidate their beach head. This scene has been enacted in North Africa, Sicily, Italy, the Aleutians, and in far-flung islands of the Pacifis.

Against tremendous odds, our men have won battle after battle, because of unfailing courage, physical and mental stamina, and aggressiveness. This is *fighting spirit*.

Team work—The ability to work effi-

ciently with others in a common enterprise. Individuals are often acclaimed for personal courage or accomplishment, but battles are won by team play. In combat every man and every unit has a job to perform—the scout, the engineer, the gunner, the radioman, the truck driver, the cook. If any man fails in his function, the entire mission may fail. Teamwork in battle involves: *leadership*—the ability to inspire and lead others; *followership*—the ability to execute properly the directions given by others; *co-operation*—the ability to adopt and adjust one's own actions to those of others; *initiative*—the ability to rely on one's self.

Endurance, strength, agility, speed, flexibility, posture, ability to relax, fighting spirit, teamwork,—these are qualities needed by every soldier in our modern army. If the inductee does not possess these qualities when he reaches us, we must consume valuable time to develop them during his already crowded training period. You well know that such qualities cannot be developed overnight.

It would be highly presumptuous of the army to direct you to develop these needed qualities in every future soldier, or even to suggest the means by which they might be developed. As in all types of pre-induction training, the army merely states its needs which may be met through such a medium, and leaves entirely to the good judgment of you gentlemen the decision as to how, and to what extent, you will adjust your school programs to meet these needs.

As I was enumerating the physical attributes a soldier needs in combat, you were probably thinking that these are the same qualities which are needed in, and developed through, such competitive sports as football, baseball, and track,—and I would agree with you. As evidence of the value of participation in competitive sports in the preparation of future soldiers, we might point to the splendid military records made by such athletic stars as:

Lieutenant Tom Harmon, All American from Michigan, twice reported missing in action, twice returned to continue his mission against the Japs.

Captain Dwight Fishwick, former Yale guard, who distinguished himself as chief of a field hospital during the North African campaign.

Walter Schooll, all American half back from Cornell, holder of the Distinguished Flying Cross, the Silver Star and six Oak Leaf Clusters to the Air Medal.

Lieutenant Charles Sprague, Col. (Light Horse) Harry Wilson, General Laverne Saunders, and dozens of others.

These men are outstanding soldiers, and there is no doubt in my mind that their experience in competitive sports contributed materially to their military success. However, a physical education program which limits its concern to the development of a few stars on a winning football team

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THERE ISN'T ANY HATCHET TO BURY

FOR A LONG TIME a lot of folks had an idea that there was a great difference between athletics and physical education in schools and colleges, but if the war has done anything at all for sports on the home front, its best job was erasing the suspicion that coaches and physical-ed men were working at odds.

Feeling that there was this difference of opinion among coaches and men who teach gym and calisthenics, some of us have sought to iron out misunderstandings—to get the men to bury the hatchet—only to find that there is no hatchet to bury.

Both parties involved are convinced that they have but one job to do; that is, training a better young manhood in our schools and in our colleges. The method of training depends upon the boy himself. If he wants to get in shape playing football and other sports, more power to him. If he decides that calisthenics are for him, that's fine too.

Much of the trouble, it would seem, comes from the mistake we make of grouping athletics under one head and physical education under another. We may avoid mistaken conclusions in the future if we group them under the same head—say physical activities.

Maybe, There's a Better Heading, But Here's What "Physical Activities" Has to Offer:

P—Physique
H—Health
Y—Youth
S—Speed
I—Instinct
C—Calisthenics
A—Athletics
L—Loyalty

A—Agility
C—Courage
T—Timing
I—Initiative
V—Vim and Vigor
I—Intramural
T—Teamwork
I—Interscholastic
E—Endurance
S—Strategy

Under the heading of physical activities, coaches and physical education men in schools and colleges can do a co-operative job to accomplish that for our American youngsters which this war has taught us young fellows must have. What are those attributes of physical fitness? Well, look at that little word game we have played above.

Do you agree with us?

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is falling far short of meeting the needs of the army. In our army, it is not the goal that a few leaders be physical supermen. Every soldier in every branch of the service needs those characteristics we too frequently expect and find only in athletes.

In the army we devote more time and attention to the soldier who is underdeveloped physically than to the one with superior development. If this same principle were practiced in all of our secondary schools throughout the nation, we would probably have fewer recruits who are unable to meet the physical demands of a rigorous army life.

A word of warning is in order at this point. I understand that some schools, in their earnest desire to prepare students to meet the physical demands of army life, are putting their boys through exercises patterned directly after the most strenuous phases of the army's post-induction physical conditioning program. Some of these exercises would tax the strength of seasoned soldiers. I can understand how such programs, particularly when under the direction of inexperienced or substitute teachers, might seriously impair the health of the participants. In the army we make every effort to fit our conditioning programs to the individual capacities of our men. Before any man is allowed to participate in the program, we give him a thorough physical examination. Then, we begin with comparatively easy exercises and increase their difficulty only as the men are able to "take it." All that we ask of the schools is that they send us boys with a sound foundation of physical fitness on which to build. We will do the rest.

Although I am not in a position to suggest a program which will meet the physical conditioning demands of all prospective soldiers, I can present you with inescapable evidence that a carefully planned program of physical education can accomplish wonders in a comparatively short time. Last year at Fort Riley, Kansas, the Special Service Division of the army gave a series of physical fitness tests to a group of newly inducted men. Six weeks later, after they had been given a special conditioning program, the men were given the same tests: These are results of the two tests: Before training, 68 per cent met minimum requirements in *over-all fitness;* After training, 90 per cent met requirements; In *strength,* 69 per cent before, 91 per cent after; In *endurance,* 59 per cent before, 86 per cent after; In *agility,* 60 per cent before, 98 per cent after.

Only in *speed* was there no appreciable improvement, and this was probably due to the fact that speed was not among the qualities the physical education program was designed to develop.

I am sure that if repeated in high schools throughout the nation, this experiment would reveal similar achievements in hundreds of the physical education programs you are operating in your various states.

But physical fitness alone is not enough. To survive under battle conditions in this war, a soldier needs also to possess a fundamental knowledge of personal hygiene and sanitation. Disease has joined the enemy in lengthening our casualty lists. * * * * *

To prepare the prospective soldiers now in your classroom to meet such situations properly, your health and physical education programs should include instruction in (1) first aid; (2) the causes and prevention of diseases; (3) principles of nutrition; (4) oral hygiene; (5) care of the body; (6) control of respiratory, intestinal, insect-borne, and venereal diseases; (7) the maintenance of a supply of pure water; (8) waste disposal; (9) the hygienic preparation of food; (10) fly, mosquito, lice and rat elimination.

In conclusion, I assure you that you are making a most significant contribution to the nation's war effort. Most of the men you are sending us now from your secondary schools brings with them a foundation of physical fitness and health knowledge on which we can build. * * * * *

THEY'VE GOT TO TAKE IT—

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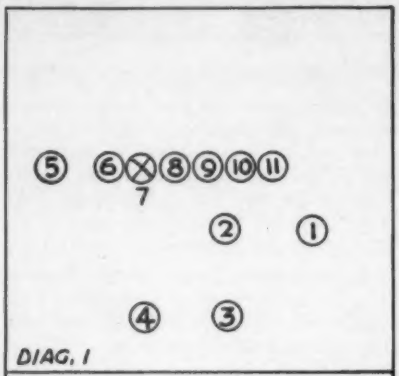
The Bowl Games

THE diagrams on this page and page 42 show a few bowl game plays.

Diagrams 1-8 are Georgia Tech plays; Diagram 2, an off-tackle by Prokop (4); Diagram 3, Scharfschwerdt's (3) buck to the weak side; Diagram 4, Prokop's in-and-out end run; Diagram 5, Prokop's end run after a fake buck by Scharfschwerdt; Diagram 6, a reverse and lateral by Logan (2); Diagram 7, a fake reverse with Prokop through center; Diagram 8, Prokop's 49-yard pass to Tinsley (5) for a touchdown.

Diagrams 9-13 are Louisiana State University plays, 9, 10 and 11 netting touch-



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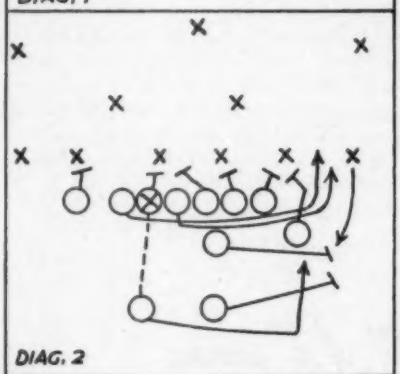
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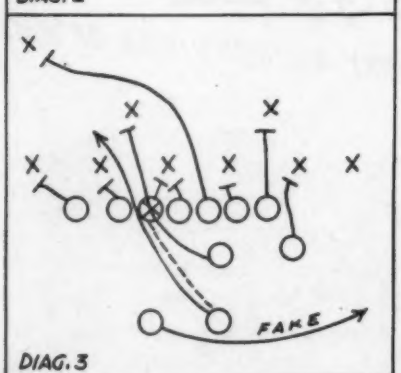

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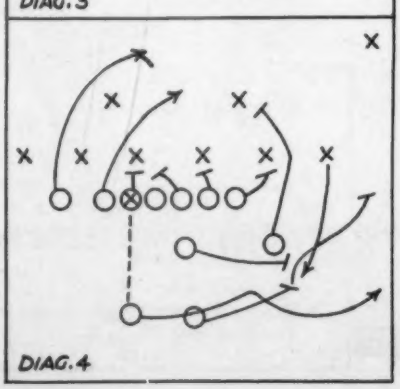
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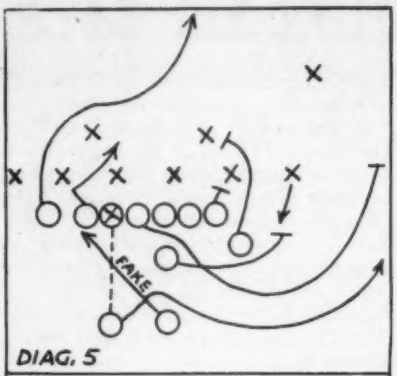

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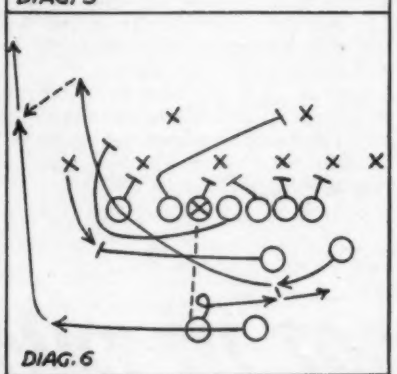
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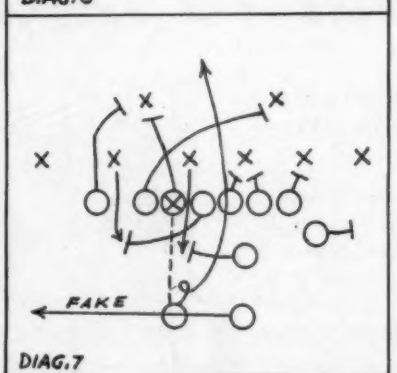

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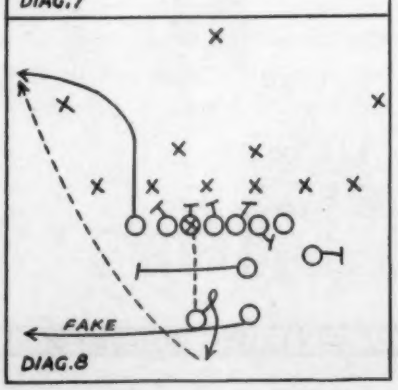

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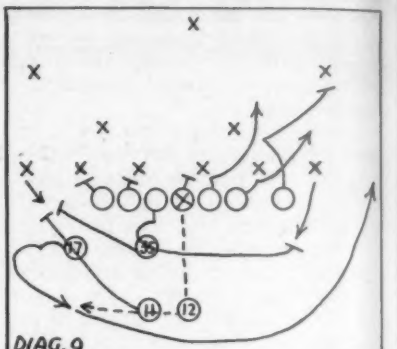

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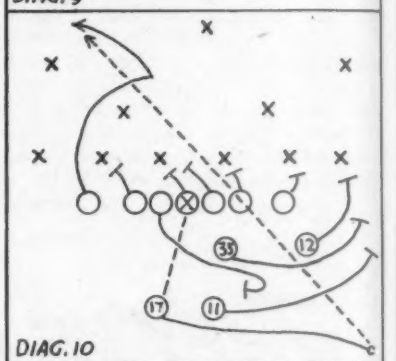

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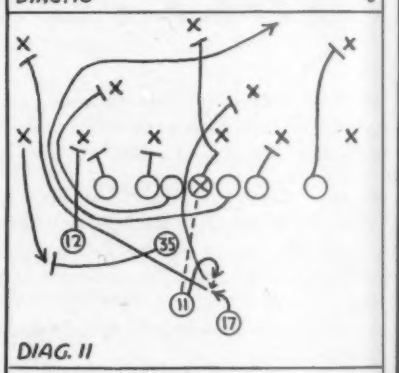

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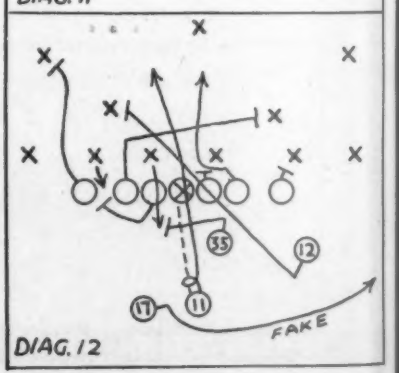

DIAG. 12

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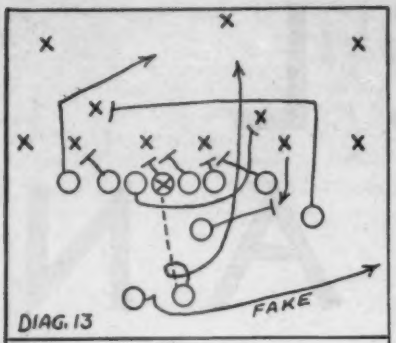
downs, 12 and 13 consistent ground gainers. Diagrams 14-17, Southern California plays. Tulsa scored two touchdowns on the play shown in Diagram 18 and her first touchdown came from the fake place-kick and screen pass shown in Diagram 19.

Diagrams 20-25 are plays used by the University of Texas; the full spinner (Diagram 26), University of Washington.



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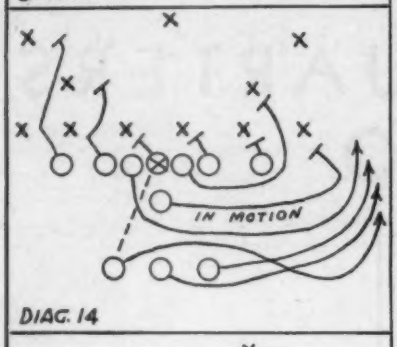

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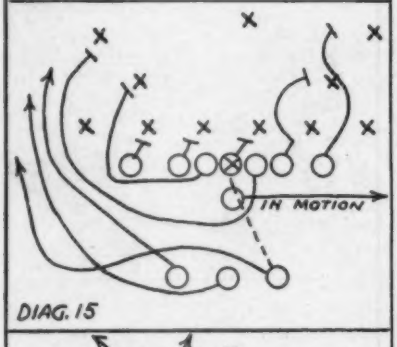

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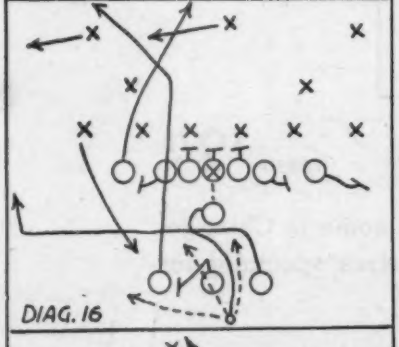
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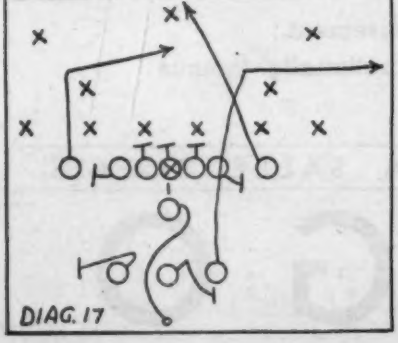
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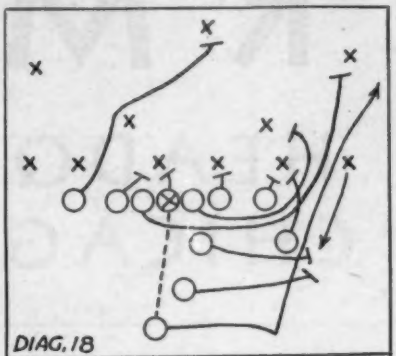
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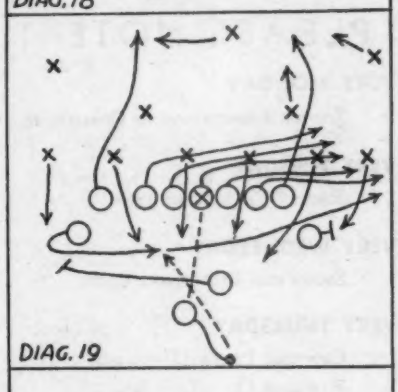
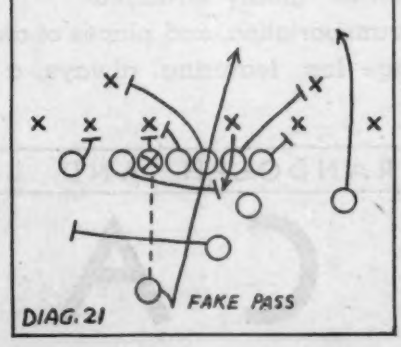

DIAG. 19

DIAG. 20



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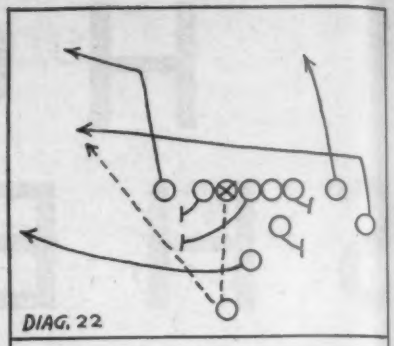
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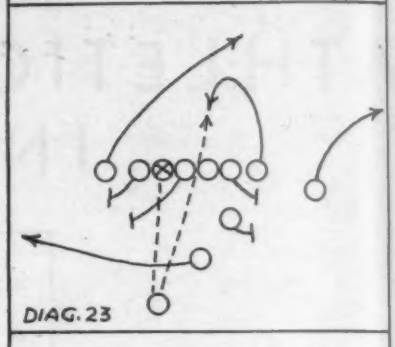
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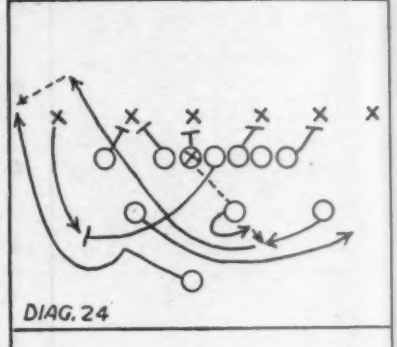
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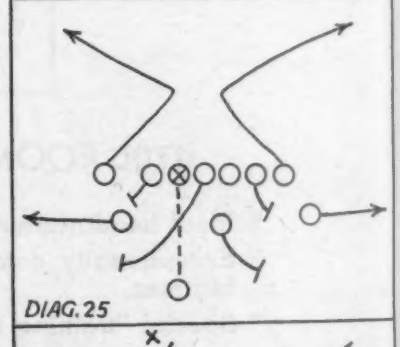
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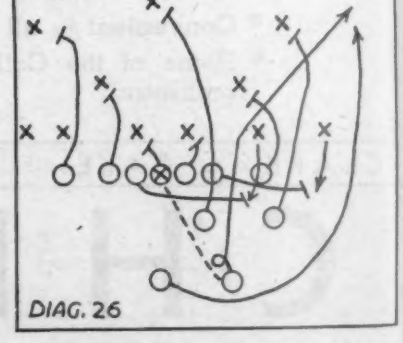
DIAG. 26

TRAINERS JOURNAL
SECTION
The NATIONAL ATHLETIC TRAINERS ASSOCIATION

The Frequency of Head Injuries in Relation to Games and Sports

By Lieutenant L. A. Pennington, H-V(S), U. S. N. R.
and
Lieutenant R. J. Mearin, MC-V(S), U. S. N. R.

THE prevention and control of serious aftermaths from injuries to the head are problems, not only for the medical man, but also, upon occasion, for the athletic director and the coach. Because the coach occasionally encounters situations in which a player is either stunned, dazed, or "knocked out," he must know how best to meet the emergency. While no coach can ever serve as a physician, he can, however, apply generally accepted rules of first aid until a physician arrives or until the player can be taken to a doctor.

The purpose of this report on the frequency of head traumas is to present the results of a survey based upon a sampling of 4,822 naval inductees. These men were Caucasian in race and ranged in age from seventeen to fifty years. Each man was examined in consecutive sequence by medical specialists in order to determine, among other items of health, the presence or absence of head injuries. If a man had earlier sustained one or more head traumas, he was further examined to ascertain the nature and degree of possible post-traumatic conditions. These examinations were one feature of the neuropsychiatric and psychologic interviews afforded each inductee prior to his admission to basic training units in the navy. In this way those men earlier subjected to trauma could be identified and their aptitude for military service determined. It should be emphasized at this point that head injuries may precipitate psychoneurotic symptoms latent in the personality. They may also result in the development of organic states, partially disabling a man for military training or for participation in strenuous athletic programs. They, indeed, may occasionally result in the appearance of traumatic epilepsy and insanity.[3] While no one of these unfortunate conditions necessarily results from head injuries, each is a distinct potentiality. Thus, it is wise for the coach to assume each injury to be serious until it is proved otherwise by competent medical examination. By so doing early treatment will be assured. This is vital, because it is universally recognized that the earlier the application of appropriate treatment, the less the likelihood for the development of serious and incapacitating aftermaths. Post-traumatic sequelae, accordingly, can be reduced in frequency and severity by the intelligent action taken by those present at the accident. The role of the coach is thus unmistakable at the time of an injury to the head of a player.

To illustrate and amplify the points mentioned above, the results of the present survey have been selectively analyzed and arranged specifically for those engaged in directing and conducting civilian and military athletic programs. These findings follow.

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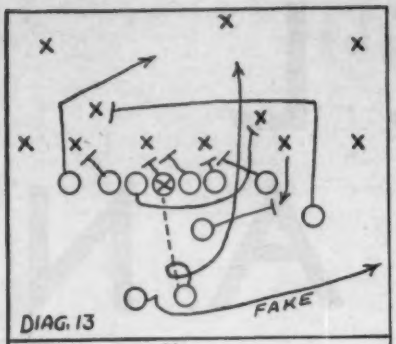
downs, 12 and 13 consistent ground gainers. Diagrams 14-17, Southern California plays. Tulsa scored two touchdowns on the play shown in Diagram 18 and her first touchdown came from the fake place-kick and screen pass shown in Diagram 19.

Diagrams 20-25 are plays used by the University of Texas; the full spinner (Diagram 26), University of Washington.



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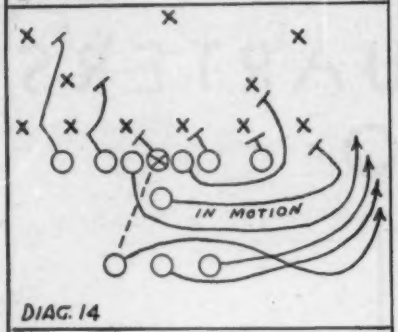

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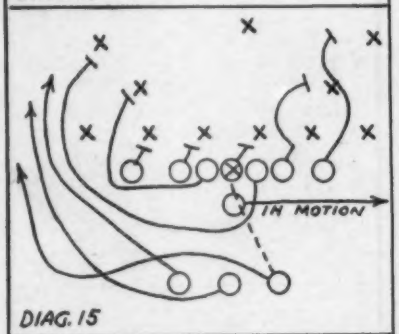

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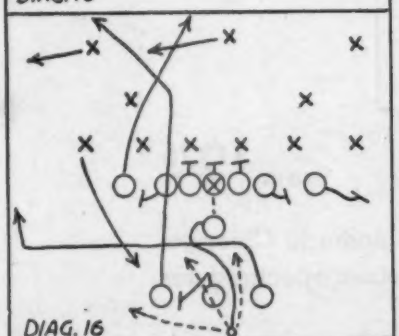
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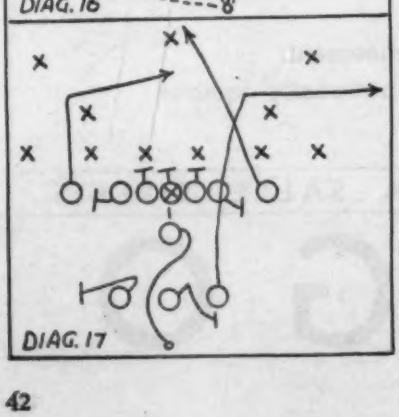
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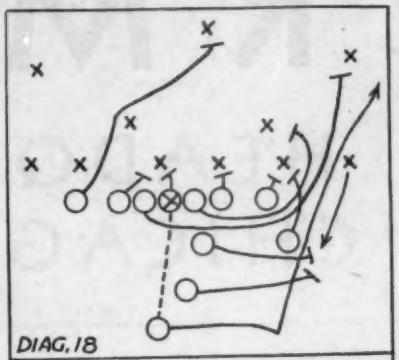
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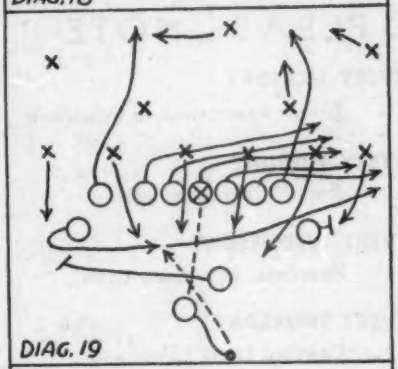
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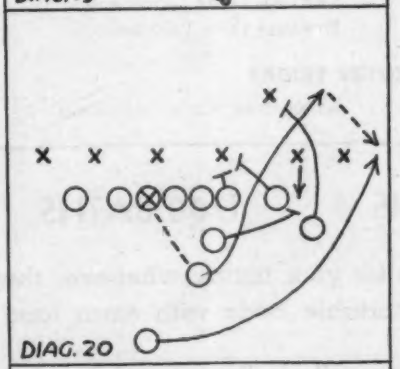
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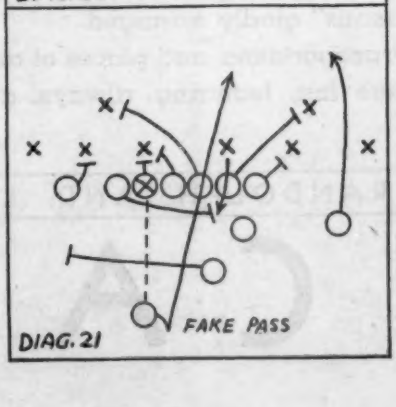

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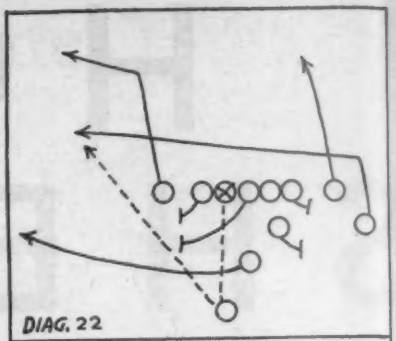
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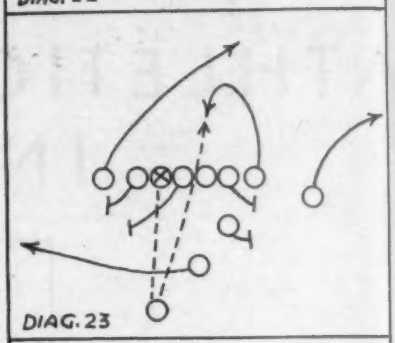
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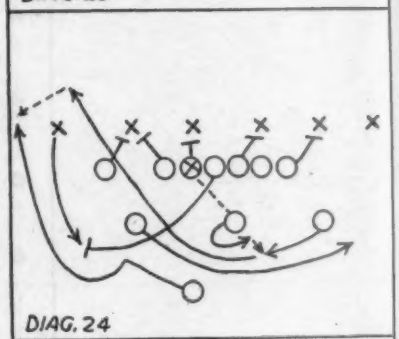
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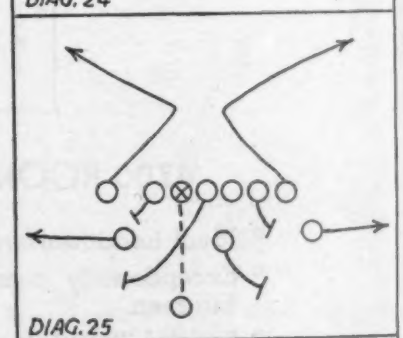
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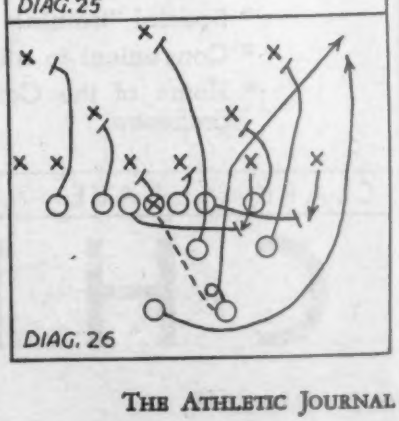
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TRAINERS JOURNAL
SECTION
The NATIONAL ATHLETIC TRAINERS ASSOCIATION

The Frequency of Head Injuries in Relation to Games and Sports

By Lieutenant L. A. Pennington, H-V(S), U. S. N. R.
and
Lieutenant R. J. Mearin, MC-V(S), U. S. N. R.

THE prevention and control of serious aftermaths from injuries to the head are problems, not only for the medical man, but also, upon occasion, for the athletic director and the coach. Because the coach occasionally encounters situations in which a player is either stunned, dazed, or "knocked out," he must know how best to meet the emergency. While no coach can ever serve as a physician, he can, however, apply generally accepted rules of first aid until a physician arrives or until the player can be taken to a doctor.

The purpose of this report on the frequency of head traumas is to present the results of a survey based upon a sampling of 4,822 naval inductees. These men were Caucasian in race and ranged in age from seventeen to fifty years. Each man was examined in consecutive sequence by medical specialists in order to determine, among other items of health, the presence or absence of head injuries. If a man had earlier sustained one or more head traumas, he was further examined to ascertain the nature and degree of possible post-traumatic conditions. These examinations were one feature of the neuropsychiatric and psychologic interviews afforded each inductee prior to his admission to basic training units in the navy. In this way those men earlier subjected to trauma could be identified and their aptitude for military service determined. It should be emphasized at this point that head injuries may precipitate psychoneurotic symptoms latent in the personality. They may also result in the development of organic states, partially disabling a man for military training or for participation in strenuous athletic programs. They, indeed, may occasionally result in the appearance of traumatic epilepsy and insanity.[1] While no one of these unfortunate conditions necessarily results from head injuries, each is a distinct potentiality. Thus, it is wise for the coach to assume each injury to be serious until it is proved otherwise by competent medical examination. By so doing early treatment will be assured. This is vital, because it is universally recognized that the earlier the application of appropriate treatment, the less the likelihood for the development of serious and incapacitating aftermaths. Post-traumatic sequelae, accordingly, can be reduced in frequency and severity by the intelligent action taken by those present at the accident. The role of the coach is thus unmistakable at the time of an injury to the head of a player.

To illustrate and amplify the points mentioned above, the results of the present survey have been selectively analyzed and arranged specifically for those engaged in directing and conducting civilian and military athletic programs. These findings follow.

1. *Gross frequency of head injuries sustained by a sampling of 4,822 men.* Slightly more than 13 per cent of this group was found to have sustained one or more head injuries. This percentage is a minimal estimate for reasons already set forth in an earlier report.[4] Thus, 634 men provided reliable evidence of having sustained head traumas prior to the dates of their examinations at one or the other of the two naval training stations studied. Of this number, however, only 566 sets of data were sufficiently complete for incorporation in the present report. These were given by 548 men and accordingly show that several inductees had suffered two or more head injuries.

2. *The frequency with which 548 men, reporting a history of head injury, failed to obtain treatment.* Data from 566 cases of head trauma were so arranged that the number of untreated injuries could be shown. Table I incorporates these findings. Attention is called to the fact that each of these injuries has been rated for severity (Table I). A brief description of each class follows. First, ***mild injuries,*** by definition, are those in which coma (disturbance in consciousness) lasted no longer than ten minutes. These men at the time of naval examination rarely revealed any marked neurological

TABLE I
Percentages of Untreated Injuries for Each Class of Head Traumas

Class	N	No Hospital	No Doctor	No Bed Rest
Mild	387	81.9	58.4	68.7
Moderate	69	72.5	37.7	44.9
Severe	110	43.6	14.5	10.9
Total	566	73.3	47.4	54.6

defects or positive X-ray findings. Second, *moderate traumas* are arbitrarily defined as those in which the comas lasted from ten to sixty minutes. In these cases the men exhibited, as compared to those of the mild category, a larger number of positive neurological and psychiatric symptoms. Third, *severe head injuries* are defined as those in which disturbances in consciousness were present from sixty minutes to days or even weeks. Among this group of cases an increase in the frequency of neurologic and psychiatric defects, compared to those of the second class, were apparent. It is of interest to note that the percentages of injuries accompanied by organic or functional (or both) symptoms increased from 4 (mild) to 18.8 (moderate) to 29 (severe) for the 634 cases studied.[4]

The forementioned series of definitions are based for the most part upon those formulated earlier (1940) by Gross and Ehrlich.[3] These definitions, however, have been presently applied to the classification of "old" injuries. Gross and Ehrlich, on the other hand, applied them in the classification of injuries recently sustained. In this connection it is wise to realize that no agreement exists on the basis for adjudging the severity of a head trauma. Many accept the duration of the coma as a gross index. Others[1] hold that the nature and duration of impairment in memory and other intellectual functions are more suitable indices. This latter criterion, however, has been of limited value in this survey by virtue of the time that elapsed between the dates of injury and the date of present naval examination.

3. *The frequency and adjudged severity of head injuries in relation to games and competitive sports.* Data on these points were available for 566 cases of head injuries. These ranged in severity from mild to severe. Of this group, 224 injuries were sustained in play activities broadly defined. This is approximately 40 per cent of the 566 cases used in this tabulation. Because this percentage superficially may appear unduly high, it is wise to recall that instances of simple stuns were classified as mild traumas. This procedure, of course, raised the gross number of head injuries recorded, but their inclusion can be justified on the grounds that cases of stuns occasionally may be more serious than some ordinarily assume.[3] Had simple stuns been excluded from consideration, the percentage of head injuries caused by games and sports would more nearly approximate 25 per cent. Table II incorporates the frequency of traumas for each of three severity-classes per sporting activity. In this table childhood games, as well as competiitve and non-competitive sports, have been listed. It is obvious from this tabular arrangement that sports of many kinds occasionally and accidently cause head traumas. It does not follow, however, that these data negate the values that accrue from active participation in games and sports. Table II, rather, must be interpreted as proof of the need for the early treatment of head injuries, whenever and wherever they occur.

TABLE II
A List of Competitive and Non-competitive Games Accompanied by the Frequency and Rated Severity of Resulting Head Injuries

Sport	Mild	Moderate	Severe	Total	Percentage
Football	72	7	4	83	37.05
Boxing	33	3	1	37	16.51
Baseball Hit	24	0	1	25	11.16
Struck by Ball Bat	15	1	5	21	9.37
Cycling Accidents	9	1	2	12	5.35
Swings (Falls From; Blows By)	7	2	2	11	4.09
Skating (Ice, Roller)	7	2	0	9	4.02
Equitation	4	2	2	8	3.50
Wrestling	4	0	0	4	1.80
Sled Accidents	4	0	0	4	1.80
Basketball	3	0	0	3	1.33
Horseshoes	2	0	0	2	.90
Swimming	1	1	0	2	.90
Golf	2	0	0	2	.90
Mountain Climbing	0	1	0	1	.45
Total	187	20	17	224	100

TABLE III
Number and Percentage of Untreated Injuries for Each Class of Head Traumas

Class	N	No. Hospit.	%	No Doctor	%	No Bed Rest	%
Mild	187	176	94.1	137	73.3	147	78.5
Moderate	20	16	80.0	6	30.0	8	40.0
Severe	17	10	60.0	4	23.5	2	11.7
Total	224	202	90.2	147	65.6	157	70.0

4. *The frequency with which those who sustain head injuries via sports fail to obtain treatment.* It was early learned that each man can easily recall whether he had (1) been hospitalized, (2) had a doctor, (3) received bed rest. The examiners consequently queried each sailor to ascertain the frequency with which each of these three conditions of treatment were encountered in a sampling of the draft population. Table III summarizes the results of these interrogations. It clearly shows the relatively high frequency with which those sustaining head traumas during sporting events fail to obtain medical attention and supervision. Comparison with Table I reveals a tendency for those injured during athletic contests to seek treatment less frequently than those injured by other agents. This trend, of course, is limited by the fact that a relatively few cases of moderate and severe craniocerebral traumas from sports were reported by those examined. To the degree that the present sampling is atypical of the draft population, then to this degree is the present statistical trend a biased one.

Study of Tables I and III, however, is none the less profitable. First, they show that most moderate and severe injuries are sustained by agents other than those related to sports. This fact is clearly shown by reference to Table IV. Second, in terms of the present sampling, those injured in athletic contests are slightly less likely to seek treatment than are those injured, for example, in auto accidents and by falls in the home.[2, 4] The athletic director and the coach can thus both play important roles in the reduction of the number of men failing to obtain appropriate medical attention and supervision after sustaining any form of head injury.

Summary

A sampling, consisting of 4,822 naval inductees, has been consecutively examined to determine the frequency with which head injuries are sustained in a

TABLE IV
The Frequency of Head Injuries Caused by Sports as Compared with the Total Number of Traumas Reported

Class	Total Number (Any cause)	Number caused by sports	Percentage (sports of total number
Mild	387	187	48.32
Moderate	69	20	29.00
Severe	110	17	15.45
Total	566	224	39.57

draft population. The following statements summarize results that are particularly significant for the athletic director, coach, and playground supervisor.

1. Thirteen per cent, a minimal estimate, of the 4.822 men had sustained one or more head injuries prior to their induction into the armed services. Of the 634 men who had been injured in this manner only 566 sets of data, however, were sufficiently complete for use in the present analysis.

2. Very nearly 40 per cent of the 566 cases of craniocerebral trauma was in some manner the result of accidents encountered on the playground or in athletic activities broadly defined. This percentage may appear unduly high because many cases of so-called simple stuns have been classified as mild traumas. While their inclusion is readily justified on medical grounds, their exclusion would reduce the percentage of cases sustaining more marked disturbances in consciousness to about 25 per cent.

3. Survey of the types of sports accidently resulting in head traumas shows football, boxing, and baseball to lead in the order named. It is worthy of note that the majority of simple stuns was reported by those injured in football and boxing. See Table II.

4. Those injured in sporting events appear less likely to obtain medical attention and adequate post-traumatic supervision than do those injured by other agents. The roles of the coach and the playground director are accordingly clear. It is their duty to reduce the number of cases exhibiting post-traumatic sequelae by requiring, whenever possible, each injured contestant to obtain immediate medical attention and supervision. Each head injury may advisedly be considered severe until medical examination has proved otherwise (Table III).

5. Sports, broadly defined, are less prone to induce moderately severe and severe head traumas than are other accident-causing agents. Sports, however, produce nearly 50 per cent of the cases of mild craniocerebral trauma (Table IV).

6. The duration of the disturbance in consciousness (coma) is often used as a gross index of the severity of the injury.[2] Regardless of this, however, the coach can best protect himself and the injured player by making available immediate medical examination. Only in this way can post-traumatic sequelae, resulting from sports, be reduced in frequency and severity.

7. The fact that head injuries are induced upon occasion by play, games, and sports does not mean that athletic programs should be eliminated. The present data, rather, support the conclusion that early and appropriate treatment for those sustaining injuries is imperative.

References

[1] Denny-Brown, D.: The Sequelae of War Head Injuries, New Eng. J. Med., *227*: 771-780, 813-821, 1942.

[2] Gross, S. W. and Ehrlich, W.: Diagnosis and Treatment of Head Injuries, New York, Paul Hoeber, 1940.,

[3] Munro, D.: Craniocerebral Injuries: Their Diagnosis and Treatment, New York, Oxford University Press, 1938.

[4] Pennington, L. A. and Mearin, R. J.: The Frequency of Craniocerebral Injuries in Relation to Military Screening Examinations, War Medicine, Chicago, in press.

THE opinions and assertions contained in this paper are those of the writers, and are not to be construed as official or reflecting the views of the Navy Department or of the Naval Service at large.

Athletics and the Size of the Heart

By W. W. Tuttle, Ph.D.
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FOR many years we were under the impression that the heart was very delicate, and that to preserve life, it was necessary to take special precautions to protect such a delicate organ as the heart must be. With the development of various laboratory techniques, however, we have discovered that the heart is perhaps more persistent in carrying on its work than any other organ in the body. By considering man's activity and his living habits, we must conclude that the heart is able to take more abuse than anyone had ever suspected, and yet do its work well. If the heart were not a most sturdy organ, no doubt many of us would have died at an early age.

Athletics have been accused of doing widespread heart damage and we went so far as to describe what was termed "athlete's heart." In reality there is no more reason for describing "athlete's heart" than there is for describing "farmer's heart" or "coal miner's heart." In any case the changes which occur are due to the exercise, not to the occupation as such.

Strenuous exercise of any description causes certain changes in the heart. This paper is concerned chiefly with the changes in heart size which result from repeated bouts of strenuous exercise over long periods of time. The immediate effect of exercise on heart size will also be discussed. This subject is of interest to trainers because certain cases have been reported in which strenuous exercise was said to be the cause of a harmful enlargement of the heart. Other cases are on record where strenuous exercise proved beneficial to cardiac function.

The most outstanding characteristic of the heart is its ability to adjust its output to the needs of the skeletal muscles and other body structures, that is, the heart compensates for a want of oxygen or fuel by pumping more blood. In so doing, cardiac capacity is increased so that more and more work can be done during a course of training. It must not be forgotten that, in explaining the increased capacity due to physical training, the heart undergoes changes in the same sense as do the muscles attached to the skeleton.

Many experiments dealing with the effects of exercise on the size of the heart have been reported. These investigations have involved many types of animals. An array of techniques have been employed, but none of them are especially suitable for detecting small changes in heart size. The results obtained are conflicting so that, from the experimental point of view, one is scarcely justified in drawing conclusions one way or another. Most people, however, are convinced that frequently repeated bouts of strenuous exercise cause an enlargement of the heart. This conclusion has been reached partly by an examination of experimental data, and partly by the process of reasoning.

If we familiarize ourselves with the effects of strenuous exercise on muscle cells in general, a clearer idea is obtained why it is safe to conclude that a strenuously exercised heart undergoes hypertrophy. Let us examine the heart itself, as to the function of the various parts and the work which each part does. The auricles have little work to do. The right auricle serves as a reservoir for the returning venous blood while the left is a reservoir for the oxygenated blood returning from the lungs. The only pumping action the auricles perform is at the end of ventricular filling. At this time they prevent a back flow rather than pump blood into the ventricles. The auricles are thin-walled, and have little pumping power, because they do not need it.

Similarly let us examine the ventricles.

The function of the right ventricle is to pump blood through the lesser circulation, that is through the lungs. There is not much resistance offered in this circuit, consequently the right ventricle does not have to develop a very high blood pressure. The wall of the right ventricle is much thicker than that of the auricles but considerably thinner than that of the left ventricle which must send the blood to the head and extremities. An examination of the left ventricle shows a very heavy wall capable of doing much more work than that of the right ventricle. Obviously the arrangement must be thus since the left ventricle must overcome approximately four times as much peripheral resistance as the right. By a process of reasoning, therefore, we may conclude, that the strength and thickness of the walls of the auricles and ventricles of the heart have developed in accordance with the work which they must do.

In order to shed more light on the question of the chronic effect of exercise on the size of the heart, let us consider the effect of exercise on skeletal muscle. It is not difficult to demonstrate that, if a skeletal muscle is subjected to a systematic program of rather strenuous exercise, it undergoes hypertrophy. This increase in size is known to be due to an increase in the amount of protoplasm in the individual cells. There is also an increase in the amount and toughness of the connective tissue which binds the cells into a muscle mass. The result is a muscle which is able to withstand greater mechanical stress.

Conversely, when an hypertrophied muscle is freed from strenuous exercise, or if it is immobilized, there is a partial retrogression. This process, known as atrophy, is due to a loss of protoplasmic substance. The loss in protoplasm, however, is not paralleled by a proportionate loss of connective tissue, thus, leaving the individual more or less "muscle bound."

While there is general acceptance of the effect of exercise described for skeletal muscle, there are some who are unwilling to apply the principles to the effects of strenuous exercise on heart muscle. It seems logical, however, that the same principles should hold for both skeletal and heart muscle. Although the evidence, gathered experimentally, relative to the effects of strenuous exercise on the size of the heart is not conclusive, the results, together with what we know to be true for muscle in general, seem to us to warrant the conclusion that strenuous exercise causes an increase in heart size. In addition, one seems justified in going farther and concluding that, if an individual ceases exercise, or materially reduces it after participating in a strenuous program, the heart is reduced in size.

We do not regard a skeletal muscle that has undergone atrophy due to all reduction of use as an injury. By the same token, it seems unlikely that a heart which has undergone hypertrophy as a compensatory change to meet the demands made upon it suffers injury; there seems, also, to be no good reason for assuming that, if a heart atrophies because of less demand for work, it suffers damage.

The evidence points to the idea that the more or less permanent compensatory changes in size do not damage the heart. In fact, these changes indicate that the heart is meeting demands made on it in the proper fashion.

The structural changes, just discussed, in heart size are to be distinguished from the changes due to a gain or loss of tonus in the heart muscle. These changes in size which accompany exercise and which follow immediately after strenuous exercise are functional and transitory. They are difficult to understand as well as to demonstrate. There is no doubt that there are changes in heart size both during strenuous exercise and immediately after, but the difficulties already mentioned relative to the determination of heart size are magnified here since the body is either in motion or a steady position is difficult to hold.

Heart-size changes following exercise seem to depend on the strenuousness of the work, as far as the participant is concerned. If the exercise is moderate, there seems to be a slight decrease in heart size; if the exercise is exhaustive, that is, so strenuous that the point of near exhaustion is reached, the heart seems to dilate, that is, lose muscle tonus.

The decrease in heart size during exercise is apparently due to the fact that the volume of blood returning to the heart during exercise can not be adequately moved out by the accompanying increase in rate alone. As a result, there is a more complete emptying per stroke, that is, the heart contracts more, the result being a diminished heart size during contraction.

Where a decrease in heart size occurs following exercise, it seems to be explained by the fact that the amount of blood returned to the heart is less; and even though the rate is slower, the relaxation need not be so complete to accommodate the returning blood, the result being a decrease in size during the relaxation phase.

The immediate effects of exercise on the size of the heart are merely adjustments which are made to meet the demands of the work which is being done, and ordinarily need to be of no concern to the trainer. It is better, however, that work undertaken by anyone not be carried to the point of exhaustion which results in accute dilation of the heart.

Summarizing, we may say that strenuous exercise may give rise to hypertrophy and to transitory changes in heart size. It is fairly safe to assume, however, that these changes do not affect health or longevity adversely, provided the participants are healthy young adults. The trainer, after being assured that team members possess no heart ailments, need have no anxiety relative to heart-size changes which normally almost always occur as the result of strenuous exercise.

Posture

By Samuel J. Picariello

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IN DISCUSSING any athletic activity, we should always consider the physiology associated with the activity. The underlying factor of body function in exercise, is posture.

In order to understand posture, let us examine the function of the body. Logically, we shall attack the problem from its foundation, the feet.

Normally the foot has a tripodal balance, the three bases of weight bearing, being the heel, and the first and fifth metatarso-phalangeal joints. In order that the body weight may be properly borne, distributed and balanced, it is necessary that each of these bases serve its full purpose. To accomplish this, the feet in standing or in walking must be held parallel to each other. This position in walking, permits the weight to be carried forward from the strong heel base along the outer and stronger side of the foot to the fifth metatarsal head, to become equalized through the anterior metatarsal area to the head of the first metatarsal.

Feet trained to be held in this equilateral position are seldom, if ever, subject to undue stress or strain upon any of the muscle groups of the foot and leg, and normal activity of this musculature in all weight-bearing and ambulatory functions of the foot thus is accomplished. The mistaken idea that the normal standing position is one with the heels together and the toes pointed away from the median line of the body to an angle of about 45 degrees, has

been the cause of much structural foot weakness, and a clearer understanding of foot mechanics has discarded the idea. In this incorrect position, the body weight, instead of falling principally on the outer border of the foot, as is normal, lies mainly on the astragalo-scaphoid joint with resultant strain upon that area, and the development of a weak foot or other symptoms.

In walking, the heel should strike the ground first. Civilized people who wear modern footgear are naturally "heel-and-toe" walkers—and thus the weight is carried forward along the outer segments of the tarsus and metatarsus to the base of the fifth digit, when it is transposed across the metatarsal heads to the great toe joint where the principal stress is absorbed as the foot propels the body weight forward and to the other foot at the completion of the step. If the feet are held in any other save a parallel position in walking, the weight tends to fall more directly upon the weaker inner segments of the tarsus and metatarsus, the heel does not serve its full function as the fulcrum by which the body weight is propelled forward, and the gripping function of the great toe in the forward push is accomplished with the weight coming upon it directly from the rear and above, instead of gradually from the outer side of the foot across the anterior metatarsal arch. The tibial muscles are over-strained, the scaphoid is forced to rotate inward and downward, the os calcis tilts inward from its normal vertical axis, and the whole skeletal arrangement of the foot is thus deranged and weakened.

It is necessary to advocate as an aid to general foot health, and subsequently good posture, certain exercises which tend to keep the feet and their musculature free from imbalance. All of the exercises suggested are to be done, preferably barefooted.

Exercise 1—Place one knee over the other so that the elevated foot hangs limply and free from contact with the other leg. Beginning slowly, stretch the calf muscles by bringing the dorsum of the elevated foot upward toward its own tibia; now circle the foot from the ankle, following an arc outward, downward, inward, upward to the place of beginning. This exercise should be done twenty or twenty-five times with each foot; it may be necessary to employ fewer repetitions to begin with, and gradually increase the circles until the desired number is reached.

Exercise 2—Sit forward on a low chair so that the legs are straight out in front, heels resting on the floor. From the ankles, turn the feet inward toward each other until the great toes touch. Now bend the toes under, flexing them forcibly three or four times. Release and relax. This exercise should be done from fifteen to twenty times, but the same precautions as in Exercise 1 should be taken in working up to this number.

Exercise 3—Standing by a chair or table to maintain balance, place one foot about eight inches in front of the other, and directly on a straight line with it, toes straight, body erect. Now bend the forward knee, and from the ankle, let the whole body drop forward into a "charge" position, all of its members except the flexed knee maintaining their same relative positions; both heels on the floor. This will stretch the posterior muscle groups of the hindmost leg, and is particularly essential for women who wear high-heeled shoes, to prevent painful spasms in the calf muscles which are already shortened to compensate the heel lift.

It is also advisable as a general hygienic measure to grasp each toe individually and gently move it in all directions, more particularly forcing it downward. All of these exercises help the general circulation, more particularly in the deeper vessels which supply the musculature, and thus aid in carrying off the waste products in the muscles which are largely the cause of fatigue.

Raising the whole body weight on the toes and walking around the room in that position may be excellent diversion for baseball players and popular movie stars who advocate such calisthenics in unscientific health articles, but this form of exercise is too strenuous for the average person, and simply tends to add too great a strain to already overburdened muscles.

Now that we have completed our discussion of the foot as it is related to posture, let us go to those factors which concern the rest of the body. The underlying thought in good posture is "the feeling of well-being." We should stand as tall as we possibly can, getting the added height by stretching the spine at its base, the coccyx; abdomen in, thighs thrust slightly forward, knees slightly bent. No effort should be made to throw the shoulders back or inflate the chest. The simple process of spine stretching will have a tendency to raise the diaphragm and place the lungs in such a position as to be able to give maximum efficiency. The head should be held erect, chin up and in, so that if one were to lean against a wall, he would feel that almost all the dorsal surfaces were touching the wall.

In an issue of the *Saturday Evening Post*, Bill Miller, a Tulsa, Oklahoma, basketball coach, gives a simple formula for postural co-ordination and maximum muscular efficiency and reaction. The following is his formula for obtaining best results.

"Commence by standing with your feet comfortably apart. (Miller has discovered that the distance between the feet for proper stance is identical to the distance from your elbow to your finger tips.) Bend the knees slightly, with your weight on the balls of the feet. Now execute the following movements:

"1—Holding your arms parallel to the ground, shake your wrists lightly at first, then with increasing vigor. To make sure the wrists are loose, grasp each wrist with the opposite hand and wave good-by energetically.

"2—Sag a little more at the knees with your arms dangling between in ape fashion. Flop your shoulders, trying to touch them to your ears on the upward movement. Let the shoulders droop to the original position.

"3—Unlock the hips and knees by letting the hands hang loosely between the knees. Work downward slowly, in sections, until the backs of the hands are flat on the floor. Lower the hips and knees as you descend. Stiff knees are the common fault of the mediocre athlete. Show me a man with knees as limp as a dish rag and I'll show you a potential top-notcher.

"Return to the erect position by three stages. Raise the hips first, straighten the back, then lift the head. The three-way breakdown should be executed three times to take the squeaks out of your hinges. Each of the three loosening movements—with the wrists, shoulders and knees—should be done at least ten times.

"The second important factor in complete relaxation is proper breath control. Stand erect with the feet apart comfortably, then bend over from the waist, keeping the knees straight. Suck in the stomach consciously while you reach down with your extended finger tips as far as possible. Next take a long, deep breath into the chest, pulling back the shoulders and coming erect at the same time. Now, very slowly, exhale through the nose while you relax the abdominal muscles.

"With the first exhalation, start bending the knees and allow your body to slump slowly and loosely. Say the word "s-a-g" and time it to end with the finish of the slow slump, so that the web formed by the first finger and the thumb fits above and against each kneecap. If you are utterly loose and relaxed, you will, upon releasing the hands from your kneecaps, collapse like a spent accordion to the floor."

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In basketball, as in any other sport, posture is important as related to feinting. It is based on the fact, that whenever we start an action such as dribbling, we must make a preliminary adjustment of the body before the action is put under way. A shift of the weight, a turn of the shoulder or head, is the tip-off. It telegraphs to the opponent just what is going to be done. Every instant during a basketball game, all the players are unconsciously tipping off their movements, and all players are subconsciously reading the tip-off of their opponents and playing to meet it.

The aforementioned suggestions, superficially look simple, but it is only by diligent practice that the average man can approach the desired good posture.

Announcements

LAST year in this column we ran announcements of valuable material that might be obtained from the advertisers of this publication. This column will again be set aside for the use of news items regarding the advertisers. In this issue, the column is devoted to the Wilson Sporting Goods Company. —EDITOR'S NOTE.

BETWEEN halves of the Washington Redskin-Chicago Bears National Professional Football League Championship game on December 26th, sponsored by the Wilson Sporting Goods Company, Mr. L. B. Icely, Wilson's President, broadcast a message, excerpts from which will be of interest.

In answer to the question what was the outstanding highlight in sports during the past year, Mr. Icely said:

"The hundreds of letters that have come to us from boys in the services of our country, telling how much our sports mean to them. Letters from our boys in training camps here—who have found out in actual practice how much advantage their experiences in football, basketball, baseball, tennis, track, boxing—and other typical American sports—gave them in their military training.

"Letters from boys overseas—boys in the front lines of the fighting in the South Pacific and in North Africa and Italy—which tell how much, how *very* much it means to play a game of touch, or softball, or basketball, or *anything*—in the rest area behind the lines. What marvelous medicine these games are—how they relax tight nerves and relieve the tired muscles of boys who have spent days in the thick of modern battle. No other testimonials in the world—testimonials to the importance of our sport today, can equal one of these simple letters from "over there." No other event in our rather full calendar of war-time sports in 1943, is so brilliantly highlighted for me as this first-hand evidence of the importance of our sports to those who need them most, today. And I get one of the biggest thrills of my career when I picture our Sports Equipment helping the boys in this important way.

"Right now, I am happy to tell all who are listening that this broadcast is being short-waved to the boys across the seas. While it will be a day late, I think it will be one of the best Christmas gifts we could possibly give these boys who deserve the best in the world—and I include those in our training camps—and those heroes in our hospitals. In these two hours the boys will forget everything but the game.

"Sports are an indispensable part of America—indispensable in peaceful times and even more indispensable when the demands of war call for a nation of physically fit people in all departments of the war effort. I am deeply thankful, as we enter this third year of war, that the importance of sports is being increasingly recognized by those in the high places. We who are in contact with America's youth and America's sports lovers needed no enlightenment. We *knew* that to take sports out of the war effort would be a terrible mistake.

INDEX TO ADVERTISERS

Athletic Institute, The 38
Atlas Athletic Equipment Co. 28
Bike Web Mfg. Co. 21
Coca Cola Co. ..... Cover 3
Converse Rubber Co. 3
Dean, Everett, Basketball Book 28
Denver Chemical Co. 39
Dolge Company, C. B. 34
Ederer Co., R. J. 35
Esquire 33
Goldsmith Sons, Inc., P. 24, 25
Hotel Sherman 41
Huntington Laboratories ..... Cover 2
Ivory System ..... Cover 4
Kahnfast Athletic Fabrics 28
Medart Manufacturing Co. 17
National Sports Equipment Co. 37
Petersen & Company 35
Porter Corporation, J. E. 32
Rawlings Manufacturing Co. 23
Reach, Wright & Ditson 15
Riddell, Inc., John T. 29
Spalding & Brothers, A. G. 1
Voit Rubber Corp., W. J. 27
Wells, Clifford, Coaching School Notes 35
Wilson Sporting Goods Co. 19, 31
Witchell-Sheill Co. 4

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THE COCA-COLA COMPANY AND THE AMATEUR SOFTBALL ASSOCIATION express their thanks to the 40,000 boys, the 35,000 girls, coaches, and the hundreds of thousands of interested student spectators who all assisted in making our 1943 intramural high-school softball tournaments a success. We congratulate the winners and to the losers, better luck for the coming year. To all of you, a happy and prosperous New Year.

W. G. Kaliska
THE COCA-COLA COMPANY

Raymond Johnson, *President*
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